

ON
DIFFICULT CASES
OF
Parturition;
AND THE USE OF
ERGOT OF RYE.

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PREFACE.

THE Reader is not to expect from the following pages a complete Treatise on the difficult cases of Parturition, and still less any thing like a system of instruction on the science of Midwifery. They contain merely some few *practical* hints, expressed as concisely as possible, on the lingering and laborious cases which will occur to every Medical Accoucheur in the course of his practice, and in the treatment of which he can derive little assistance from the professed treatises on the subject of Midwifery in general.

Whether I may have performed an acceptable service to my fellow-labourers in this department of Medicine in giving them these results of my experience, or not, remains to be decided, but at all

events I shall not be accused of starting any crude or fanciful theories, or of indulging in any whimsical notions which would not stand the test of experiment. The materials from which this publication has been written have been collected during many years in the course of the author's practice. Notes have been regularly made of all singular and difficult cases at the time, and of the practice pursued on the occasion, and from the accumulation of these manuscripts the present work has been gradually formed.

In the progress of these close observations on my Midwifery practice I felt anxious to introduce any improvements which my more experienced brethren could suggest, more especially for the acceleration of the Uterine action, and this led me to *prove* the virtues of Ergot of Rye. The results of this proof will be found amply detailed in the subsequent Treatise, and I feel assured they are such as to satisfy every one desirous of information on the subject.

No one modern improvement in Medical Science has, in my opinion, conferred so great a benefit on Society in general, as the superior skill, information, and talent, at present directed to the

science of Midwifery. The death of a female in childbed is now comparatively rare among practitioners in the country; and from the various methods adopted for the acceleration of the birth (of which none can be compared with Ergot of Rye) the proportion of still-born children has been very greatly diminished. A science, so manifestly conducive to the preservation of life, and on the skilful management of which the existence of numerous individuals so peculiarly depends, may readily be admitted to be of the very highest importance. And it is therefore somewhat extraordinary that men of rank and high reputation should have attempted to degrade the Accoucheur as unworthy of the same consideration as the regular Medical Practitioner. I believe I advance the opinion of most of my brethren when I say the Medical Practitioner in the country would most gladly resign the Midwifery practice to the females, as in former days, but at the same time I am convinced that in the present state of information on the subject, such resignation would be attended with a great annual sacrifice of valuable lives.

Dr. Kinglake of Taunton accuses the Medical Practitioners of having cajoled the women into the

indelicate system of retaining male attendants on such occasions; but were the doctor to make a few inquiries in his own neighbourhood, I have little doubt he would soon discover the sort of cajolery that has been practised. Should he fail, however, in obtaining this knowledge at home, let him consider what effect the following statement from this neighbourhood would produce in cajoling the females into the modern system.—Of twenty-one deaths that have occurred in this neighbourhood within the last twelve years, nineteen have been women attended by females only. When they meet with difficulties which they do not understand they send in haste for a medical man, but as none perhaps reside within several miles, the assistance often arrives too late, and the woman perishes from the ignorance of the Midwife. Three of the above were cases of placental presentation, in all which I was called, but, although on the spot very quickly, it was too late to prevent the fatal consequences of improper treatment. Six died of flooding after delivery, one of ruptured Uterus. Of several I have not been able to ascertain the cause of the death. This statement, I should imagine, will sufficiently explain the system of cajolery by which the Accoucheur has

engrossed the practice of Midwifery. It must further be noted that, perhaps, in no part of the kingdom does the system of *retaining* a Medical attendant on delivery prevail to so great an extent as in this neighbourhood. Nothing but the very lowest state of poverty, and the refusal of the parish officers to incur the expence, can at all reconcile any female in this district to place confidence in a Midwife. The cases attended by women only, are therefore rare, or I have no doubt the number of deaths in the period mentioned would have been far greater.

Before I conclude this Preface I wish to record the following cases which will not properly find a place in any subsequent part of the work, but as they are somewhat extraordinary, particularly the first, I have no doubt they will be considered interesting by the profession.

On the 3rd of November, 1818, I was called to a woman named Bray, who stated that she had had labour pains during the night, but that they had now ceased. I saw her again on the 9th, 14th, and 21st. On the last occasion I examined and found

a shoulder presentation. I proceeded to turn the child, and with that intention laid hold of one leg—not at all suspecting that there was more than one foetus, or that there was any thing extraordinary in that. I brought the hips down as usual, but finding that when I ceased to draw down, it was retracted as if by a spring, I tried all the force I could exert, when I discovered something protruding from the sacrum which I broke. I then delivered the shoulders easily. On passing up the finger I found two necks and two heads. I introduced the fingers of my right hand into one of the mouths, and applied those of my left to the Occiput, and with a little exertion the other head soon followed. The parents being poor carried it round the country as an exhibition, and thus prevented my opening it. Both the heads were well formed, and resembled each other, measuring seven inches each in diameter, the necks were also perfect, an inch and two lines between them—two arms only, well placed. When the body was covered over, and the arms brought across the chest, no one would have suspected but that it was two children—all the abdomen seemed perfect, and every part except the sacrum, from which protruded two legs without a joint, fixed by

a bony attachment—the two legs adhered together by a common integument, and were at right angles with the body. It was perfect in the other two legs. The organs of generation were male, with some appearance of female also, namely, a cavity in the perinæum three quarters of an inch deep. When it was laid on its back it appeared as a perfect child with two very natural heads. It weighed 14lb. 3oz. I was one hour and ten minutes delivering the woman. The Meconium was discharged perfect, the child to appearance having been alive thirty minutes before its birth.

On the 21st of March, 1820, I was called to I—, Bodmin. I found her in great distress from an over-distended abdomen; visited her on the 23rd and 25th, and as she was unable to sit or lie down in bed, I thought it right to rupture the membranes. She was in the eighth month. Labour came on in fifteen minutes, and in one hour and fifteen minutes a child was born with little decrease in size—finding unruptured membranes I broke them, and a pint of water was discharged; as I expected labour to come on, I examined to ascertain what caused delay, when I found the membranes not ruptured, I

considered it strange, and passing up the hand I delivered the child ; on examination I discovered that there was still another, which was born in a few minutes. I then attempted to take the placenta, when I found three completely separated, and each was separately delivered. Had I turned as soon as I had broken the membranes, the third child would have been born second, such having been the intention of nature ; this case is also curious with regard to the placentas being separate from each other.

On the 20th of May I was called to C——, of Withiel. I visited her again three days after. The distension was so great that she had supported herself against a chest of drawers whilst she slept for the last two nights, being unable to lie down or sit. I ruptured the membranes, but as it had not the effect of producing labour pains, I administered the Ergot of Rye one hour after. In twenty-seven minutes after the child was born, and as I perceived there was another, I examined, found the feet, and delivered it immediately ; this was dead. Labour pains came on very feebly, and I therefore administered another dose of Ergot of Rye, and in two hours and five minutes a third child was born—all

females. Two are now living. I tried to extract the placenta by one cord which gave way; one other I had drawn away previously, as I fancied that it interfered with the last child, preventing it from descending as quickly as it might have done, by the third I extracted it, when I found only one placenta with no apparent division. I saw immediately whence two of the cords proceeded, but could not discover the origin of the third, and was almost inclined to search for another after-birth, but previously to doing so, I examined the membranous part of the placenta, and then found the three separate bags; the membranes of one appearing in some measure to arise from a part of the other membranes, or at least so connected that I was unable to separate them.

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ERRATA.

The Reader is requested to correct the following Errata; and it is hoped, for the few other immaterial errors, principally in names of persons and places, the writer's great distance from the place of printing will plead a sufficient excuse.

- Page 18 line 13, *for* of the Pelvis, *read* in, &c.
— 22 — 2, *for* to this operation, *read* of, &c.
— 27 — 16, *dele* (;) *after* silk, and place it *after* operation.
— 31 last line, on reaching, *add* the cavity of.
— 34 line 8, *for* elasticity *read* inelasticity.
— 36 — 10, *for* fatal *read* foetal.
— 41 — 18, *for* in all efforts, *read* in all her efforts.
— 55 — 4, *for* other respects, *read* every respect.
— 60 — 21, *for* unmatute, *read* immature.
— 61 — 15, *for* enlarged, *read* unchanged.
— 100 — 9, *for* os temporis, *read* ossa temporum.

INTRODUCTION.

THE art or science of Midwifery, as practised by our ancestors, consisted merely of endeavours to assist nature, through the medium of the constitution, by internal medicines. Since it has devolved on the Medical Practitioner it has become almost entirely mechanical, and the number of instruments at present recommended, in all works on this subject, often causes the practising Accoucheur to suspect that it had been better for society had they never been introduced. Recourse is too frequently had to them on very trifling occasions, and sometimes even when the uterus is the part which requires assistance. That the uterus should, if possible, be acted on through the constitution, need scarcely be remarked, as every one acquainted with the subject will immediately admit the truth of the observation. Many things have been recommended and tried for this purpose by the Midwives. These having sometimes failed from the wrong position of the head, and at others from the disproportion of the parts, have been laid aside as entirely useless. And yet that something is necessary on such occasions to increase the expulsive pains, must have occurred to every practitioner.

It would be more especially desirable, in lingering cases of first children, where the pains are frequent and acute—irritation of the patient's mind great, producing prostration of strength—the Os Uteri partially dilated, thick and rigid, or thin, long, and flaccid—the patient fatigued and constantly changing her position, enjoying no rest for nights, and at last, through previous exhaustion, sinking under instrumental aid. We also frequently find, when the water is discharged, that the pains or throes do not succeed it for days. The child is pressed on by the Uterus, and is frequently born dead, after three or four days confinement to the bed, with constant pain and irritation of mind to the mother. In many other cases we may observe that labour can be retarded or accelerated by apparently trifling causes. We should endeavour, then, to take advantage of the hints which nature gives us, and learn to profit by them. When we find some accouchements of the same woman attended with constant pains for many days, whilst others have been quick and almost without pain, even when the child is of the largest size, it is obvious that this variation must be owing to some specific action on the Uterus.

Instances of this nature may frequently be noticed in convulsions just at the full period of gestation. The child in one case may be ushered into the world in a few minutes, whilst in others, as soon as the pains come on, and the Os Uteri begins to dilate, convulsions almost immediately make their appear-

ance, the pains stop, and the labour is retarded. We may now wait until the pains having dilated the Os Uteri in defiance of the convulsions, and delivery is effected, or we may deliver the child by artificial means, or, lastly, we may delay until the convulsions overcome the patient, and destroy her. In such delicate and difficult cases, could we cause the excess of blood circulating in the system, as soon as the child is deprived of it by the contraction of the Uterus on the Placenta, which, as soon as labour has commenced, will admit no more blood to pass through it than is barely sufficient to support the existence of the child, but none for its further developement; nature requiring none for this purpose at the period of delivery—Could we, I observe, throw this excess on the Uterus, and retain it in that direction until the end of the labour, then as the Uterus contracts, and becomes unable to receive the whole of the blood sent towards it, it would be thrown on the abdominal muscles, and cause them to act expulsively, instead of being driven from the part to the brain by the irritability of the Os Uteri. The consequence of such determination on the brain is well known to be not merely spasmodic contraction of the Uterus, but of the muscular power of the whole body. If in these cases we cannot succeed in causing the blood to proceed in the right channel, we may endeavour to assist nature in doing what we see every day effected by her. After extracting the over-circulation of the brain, we may try antispasmodics to lull the muscular

parts of the body to rest, and wait a more favourable opportunity to allow nature to perform her work. If convulsions continue in defiance of all our medical resources, we have still the mechanical one left, which we should not hesitate to use when necessity requires it.

The subject of convulsions has been most sadly neglected by most of our medical writers. The greater part of the cases occur to medical men in very extensive practice, and their time is too fully occupied to allow them to communicate many interesting facts, which would be of great benefit to the faculty in general. For any tolerable account of the disease, such even as any Accoucheur in extensive practice could furnish, we are almost entirely indebted to foreigners*. I shall therefore pursue this subject somewhat further, in the hope that it may be found acceptable to the junior members of the profession.

* The French have given us the best modern accounts of this disease. Two publications, at present very little known in this country, were produced in 1824. "*Traite des Convulsions chez les Femmes enceintes en travail et en Couche*, par Miguel;" and "*Considerations sur les Convulsions que attaquent les Femmes enceintes*, par Chaussier."

The latter author having been years Chef de la Maison d'Accouchement in Paris, is well calculated to form an accurate opinion on the subject, and the estimation which his work is held in abroad, may be seen by the number of editions which it has already passed through.

CHAPTER I.

ON PUERPERAL CONVULSIONS.

WE very seldom find a true puerperal convulsion until the last months of gestation, or until the Os Uteri begins to dilate, or the neck to be lost in the general distension of the organ. What we observe before this period, is not puerperal convulsion, but spasmodic attacks from the pressure of the Uterus on any diseased or irritable part, or from the action of the foetus in utero on its first motion. These convulsions, or rather spasms, end in faintness, whereas the puerperal convulsions end their paroxysms with great irritability. Constant moving and shifting the situation, the carotid throbbing, stertorous breathing, with a small pulse, are the marked and dangerous termination of such paroxysms. If the attack subsides, we find, after delivery, in cases of this sort, great prostration of strength. With regard to the buffy appearance of the blood in these convulsions, it is not greater than at other periods of gestation, nor even so great after the delivery has taken place. The blood assumes the buffy coat whenever any one organ is gorged with blood, to the loss of other parts of the system. We find this appearance in a very great degree in persons addicted to spirituous liquors, although there be no

disease except the engorgement of the liver. In fact, in excessive circulation of any sort, attended with engorgement, we find this to be the case; but where there is no engorgement, though the circulation be quick, but not carried on with a great action, or, more strictly speaking, with a strong arterial contraction, the blood does not assume this appearance. The buffy coat then, I consider, does not depend entirely on inflammation, or obstruction of the blood through any particular part, but on an excessive engorgement of a particular part, or on an imperfect circulation; otherwise we should not find, as is generally the case, that the buffy appearance does not exist in the first portion of the blood extracted on any occasion.

From these considerations, we may learn not to be deceived by the buffy appearance of the blood in cases of convulsions. We must not attribute it to inflammation, and continue to abstract blood until the buffy coat ceases to appear, but we should rather excite the uterus to action by any means that we have in our power. While uterine action continues, the convulsions will entirely disappear. I would, therefore, earnestly recommend every practitioner not to delay the delivery until serous effusion or sanguineous apoplexy has taken place—then it will be too late to remedy the evil. I would, without hesitation, apply all the means in our power, and not leave the patient until I had been successful in my endeavours.

Case 1. In the following case of Eyres, I was called in at 3 o'clock in the afternoon, Feb. 13, 1821. I found her held by two women. After a few minutes, she became calm, and talked rationally, complaining of violent pain in the head, as though it were splitting. When the pains came on, she said, the fits presently succeeded, and the pains ceased. In a few minutes a pain came on, as if it would be expulsive; but almost instantaneously the convulsion followed, which put an end to it. I examined, and found the Os Uteri partially dilated, about the size of a shilling; I kept the finger applied until the pain came on, when I found the Os Uteri dilate for a moment; the convulsions again came on, and, from the spasmodic twistings, I was unable to keep the finger applied to the Os Internum. I then considered it right to bleed her largely; but finding her a weak woman, I pursued a different treatment.

After giving her antispasmodics, she appeared much the same. When the convulsions subsided she appeared lost for a moment, and breathed sonorously, with extreme lassitude. At 7 o'clock I made up my mind to turn the child, as I had often found that by bringing on a right action in the Uterus the convulsions may be stopped. This I effected in a few minutes; but as soon as I dilated the Os Uteri, the convulsions returned in all their hideous form. I continued—dilated—and delivered the child. During the paroxysm, as I was taking away the after-birth, the mother cried out that the

child was coming, being perfectly ignorant of its birth; and even when it was shewn her, and she heard it cry, she could scarcely be induced to believe it her own child. The convulsions still continued, with longer intervals. I gave her ʒi of musk, to be doubled every paroxysm until they ceased. . Three doses I have invariably found to overcome the complaint. I have met with a great many similar cases, which I take this opportunity to say I intend to detail, when I come to speak more particularly of the Ergot of Rye.

It has been often asserted, that puerperal convulsions come on without any determination of blood to the head; this I conceive to be altogether a mistake. On the contrary, I consider it to be one of the marked distinctions of puerperal convulsion. We frequently meet with convulsive spasms of the legs, from cramp, or pressure on the nerves of the lower extremities by the head of the child; but these must be distinguished from puerperal convulsion, where every muscle of the body is called into action, more particularly the heart. The action of this important muscle prevents the return of the blood, and causes a dreadful congestion on the head; and this, combined with the glassy appearance of the eye, and stertorous breathing, when preceded by the Uterus acting on its orifice, I should call the marked symptoms of puerperal convulsions. Miguel speaks of convulsions in the early months of pregnancy; these I consider to be nothing

more than common convulsions, not at all *dependant* on pregnancy, though perhaps *aggravated* by it; they commonly end, or wear themselves out, without the least danger to the woman; other than these, I have never met with in the early months. But I am surprised that he should call them spasms, as he calls tetanus; and should distinguish betwixt spasms and convulsions, defining spasm to be contraction without dilatation, but convulsion to consist of spasm with alternate dilatation. What, we may ask, is the cause of that action in the present case; unquestionably the pressure of the brain arising from the engorgement of its blood-vessels, as every muscle appears to be in action, excepting the one that conveyed the excitement in the first instance, and that also in many cases, but in a very imperfect manner; frequently we find in convulsions that the child has been expelled by the convulsions in a few pains, when on other occasions the same woman has had lingering labours, arising from the Uterus acting with the other muscles; in these instances no danger is to be apprehended, as there is a sufficient quantity of blood retained by the Uterus to prevent an over-distension of the vessels of the head. The name convulsion has not been given to the contraction of the heart and other parts, though, strictly speaking, these are convulsions, but we find their excessive contraction designated by a term for each particular organ, as vomiting for the stomach, voiding urine for the bladder; palpitation for the heart,

and hiccup for the diaphragm; but these are of little consequence to the present question.

Once more I would impress on the accoucheur the words of Mauriceau; that convulsions are highly dangerous to both mother and child, unless the female is delivered as soon as they appear, having recourse, in certain cases, to ordinary treatment, until the Os Uteri begins to dilate. La Motte expresses the same opinion, but in a more equivocating manner. Gardien says you ought to wait, because labour comes on very quickly, and the child is sometimes born in a couple of pains. Two instances that I have met with support the opinion of Miguel, that convulsions are mitigated by the discharge of the Liq. Amnii. These were the only cases in which the membranes were not broken before my arrival. In one instance, the woman had no return of pain or convulsion for many hours, and the other labour proceeded very well in about twenty minutes. Miguel is of opinion that the Os Uteri in some cases cannot be dilated; but I have no doubt that it may be always effected by holding the woman by strength of arm. He advises the Os Uteri to be cut into; but this is an unnecessary and useless introduction of instruments; for in the worst cases I have seen, the Os Uteri may always be dilated by a little more trouble; the only reason I can fancy for such a proceeding is, that the operator is often, in a great measure, paralysed by the shocking sight before him.

It has often been asserted, that in some cases it is

impossible to turn. I have been fortunate enough to have met with no such case. The Edinburgh Med. Mag. states, that the Os Uteri cannot be dilated until its neck is lost or obliterated. In general it is found that convulsions carry off the patient just as the child's head is born; this is the consequence of deferring the delivery too long. A great degree of excitement is caused by the accoucher's hand first passing through the part; and when the disease is fully formed, the moment the accoucheur assists, the fatal mischief ensues; the spasms encrease, the head becomes more turgid, and, in the general struggle of nature, apoplexy is produced. Then we look back on our patient, and fruitlessly regret that we had not been more prompt in our treatment. If, then, the convulsions be not encreased to an alarming degree by the first efforts to dilate the Os Uteri, the operator should continue as quickly as possible, until it is sufficiently dilated to bring away the child; then proceed to turn. The operation of turning may in these cases be more easily effected than in any others, the Uterus being completely flaccid; if it contract at all, it is only very partially; a few fibres perhaps in one part, the other parts remaining completely flaccid, so that the child is very easily turned, and may be brought away with the greatest safety. I should advise every one, before they proceed to turn the child, to administer the Ergot of Ryc. I have found it in most cases efficacious in producing expulsive efforts after

the membranes have been ruptured, expelling the child generally in a few pains, and in every case it appears to remove the more alarming symptoms of the convulsions, and I therefore consider it to be highly beneficial.

CHAPTER II.

A GENERAL VIEW OF THE PROCESS OF LABOUR, WITH A PARTICULAR REFERENCE TO ITS EXPULSIVE FORCE—CONSTRUCTION AND NATURE OF THE UTERUS—PERIOD OF NATURAL LABOUR—MAY BE EARLIER OR LATER IN DIFFERENT INDIVIDUALS.

THE Uterus of the same individual continues the same, but at different periods may be differently acted on. This has given rise to the trial of various medical substances, with a view to cause the Uterus to assume its proper action during the time of its contraction and dilatation in labour. A day before labour commences, the woman appears better than she has been for weeks, the Uterus is sunk lower, the abdomen smaller, and every part takes on a new form, without the occurrence of pain. And if nothing more than contraction interfered, labour would proceed without pain, as well as the discharge of urine, &c. The pain is caused by the dilatation of the mouth and neck of the Uterus. An expulsive force must therefore be produced greater than the resistive; and if this be applied quickly and strongly, it will soon overcome the resistance, as the stimulus acting violently on one part, necessarily reduces the resistance of the other; two parts seldom acting long in opposition to each other; if one act well, the

other in general does not. It is of little consequence to our present purpose, whether it act by allowing the Os Uteri to dilate, or the uterine fibre to contract, provided the end be obtained ; that is, delivery in two hours instead of fifty. At the commencement of labour certain efforts are made by nature, which, by their dilatation of the neck of the Uterus, cause considerable pain, technically termed the pains or throes of labour. At first these are slight, (and at this time, could we cause the Uterus to use its utmost expulsive powers, we should seldom meet with impediments, except in wrong presentations,) and the intervals considerable ; after some of these efforts, the Uterus contracts, and forces the membranes through the Os Uteri ; a glairy fluid is discharged, consisting of a kind of mucus from the Os Uteri. After this is produced, the pains become more severe, return more quickly, and continue longer ; the pulse becomes quicker, the whole constitution is affected, perspiration comes on, the face and head become turgid, and a general agitation follows. As the Os Uteri dilates, the mucus becomes tinged with blood ; the neck of the Uterus has now disappeared, and the membranes protrude ; the child's head at the moment of pain is raised by the compressed waters from the Os Uteri towards the fundus, while the Uterus descends into the pelvis. When the pain stops, the Uterus again rises, but not so high as before ; the tumour formed by the membranes disappears as the Os Uteri relaxes ; then the pains should come on

expulsively, and the labour be completed, as it often is, in three or four pains. This naturally is the common process. Towards the end of labour the succession of pains should be rapid, and the efforts or expulsive force strong; but in many cases we find it lingering, and instead of a pain every five minutes, one perhaps does not come on for as many hours. At first the pains were in the back; but now nothing is complained of more than the expulsive force, until the nymphæ begin to be obliterated, the labiæ turned inwards, and lost in the general distention of the vagina and perinæum; then comes on the pain of dilatation again, which is attended with convulsive and tremulous action, and with prostration of strength; these symptoms are soon dissipated by the birth of the child.

It is evident that parturition calls into action the concurrence of several agents. The cause and effect of labour arise from the Uterus, which compresses the child until its neck is so stretched as entirely to disappear; then, one part being weaker than the other, gives way, contraction comes on, which compresses the foetus; the blood, prevented from circulating in the same quantity as before through the placenta, is thrown on the Uterus, and acting as a stimulus, excites the Uterus to excessive action. Thus as the foetus approaches more nearly to an extraneous substance, the greater are the efforts made for its expulsion. This may invariably be observed in dead foetus, which are generally expelled with little or no

pain. Hence the greater the expulsive powers, the less the resistance from the soft parts. The Os Uteri being the only outlet, must dilate when the Uterus is properly filled by the full developement of the foetus. The Uterus is a muscular substance, reticulated or net-form, many of its fibres running uniformly on its inner surface from the fundus to its neck, others crossing diagonally, others horizontally intermixed, so closely placed, as to have been in former times taken for a muscle, for an attachment and separation of the placenta. The Uterus will dilate and contract much in the same manner as the Vesica Urinæ; the abdominal muscles and the diaphragm assisting in both cases. The irritation is supposed by some to bring on the action. I rather suppose it to arise from the obliteration of the neck of the Uterus, and the overstretching of the part. The Os Uteri being the weakest first gives way, and as this becomes more stretched, the Os Uteri being the only outlet must of course dilate, and the waters then insinuate themselves through the most unresisting parts. Before conception the cavity of the Uterus is a flattish triangle curved inwards, this leaves the Uterus thick at the middle and fundus; the thickness of the neck is very great, and equals nearly one-third its length, which nature has provided to prevent premature delivery, since no child can be born naturally until the neck has disappeared, and is lost in its general cavity. It begins to shorten at the fifth month. The dilatation of the neck once

begun, continues to proceed with the growth of the foetus, until it no longer exists; when labour commences, the pain begins, and when there is nothing more to dilate without the danger of rupturing the organ on every side except at the orifice, this being the weak part, is dilated and forms the natural outlet for the foetus. As the neck of the Uterus has neither equal length nor equal thickness in different women, and as the development of its fibre may be retarded or quickened by various circumstances, as the operation proceeds, in proportion to the increase of the child, which may be faster or slower, it is obvious that some children may be born before the ordinary time of nine months, and that the birth of others may be protracted until after that period, and yet these may be natural periods, and the woman may have a natural delivery in either case; for however small the dilatation of the Os Uteri may be, it will allow the mucous fluid secreted in the Uterus to exude.

CHAPTER III.

LINGERING LABOUR—ITS GENERAL CAUSE—THE PRACTICE IN CASES OF DEFORMED PELVIS.

GIFFORD has asserted, that all that is required in labour is a glyster, opium, and patience. But surely it is the duty of a Practitioner to have recourse to the best assistance his art can supply in cases where the labour is lingering, from weakness, unskilful treatment, convulsions, passions of the mind, rigidity of the Os Internum, and more especially when irritation is brought on by attempts to dilate it with the finger, without effectually doing it. Lingering labour will frequently exhaust a woman's strength, when the presentation is right, notwithstanding all our attention. A long confinement of the head of the Pelvis is equally dangerous to the mother and to the child; by its pressure against the soft parts it stops the circulation, bruises the soft parts, and often brings on sloughing and gangrene. When dangers of this sort occur, I would not advise the adoption of the forceps, as I verily believe that more lives have been lost than saved by the use of them. Because delivery may be expedited by them, they are often had recourse to without the slightest occasion; and, from the cases I shall hereafter introduce, it

will appear that whilst we have medicines which will expel the child naturally, there there can be no good reason for the use of an instrument, which often occasions sloughing and death. When there is scarcely sufficient room without the forceps, it is evident that such an addition to the diameter of the child's head must greatly increase the difficulty, and in the same proportion augment the danger.

In other cases, where the Pelvis is deformed, if the uterine action be strong, we frequently find the child's head accommodating itself to the shape of the pelvis, which would be impossible if the forceps were introduced. The head is often lengthened, and one side pressed in to meet the deformity; in such instances, if the forceps be applied on the child's head, the mother must greatly suffer from the pressure of such a hard inelastic substance against the soft and yielding parts. In other cases, when the uterine action is great, the Symphysis Pubis and the junction of the Innominata and Sacrum often slightly yield to the efforts of nature, when the pressure is equal on all the parts. The head accommodates itself to every curve of the Pelvis, and fills every part; and thus in the most deformed Pelvis the whole passage will be filled with the head, let the deformity be of what description it may. The pains, therefore, can force the head into any shape, and, with a proper presentation, the child will be born, the axis of the Pelvis being of little consequence provided there be sufficient space. The

absolute narrowness of the Pelvis seldom affects every part, it is generally found on one side only; the other being of its natural size, or frequently larger than usual. The smaller diameter generally is the one affected; it very rarely happens in the transverse direction, and the malformation is more frequently in the brim than the outlet.

The narrowness of the Pelvis is the great, it may be said, the only cause of difficult labour; for wrong presentations are trifles, compared to a diameter of three inches. In such cases the delivery must, of course, be far more laborious than when the diameter is three inches and a half; and yet I have seen several *natural* deliveries with a diameter of three, and one where the diameter was scarcely two inches and a half, in which the long diameter of the child's head was more than eight inches, and the short not two inches and a half.

Baudelocque mentions a case, in which the long diameter of the child's head was seven inches, and the short two inches six lines; and yet in these extreme cases, the head, within twenty or thirty hours resumes its natural shape, as though it had never been pressed, and the child appears perfectly healthy. How wonderfully does this exhibit the excellence with which nature has adapted the head of the fœtus to be moulded into almost any shape without injury to the brain, or vital organs of the child.

When the small diameter of the Pelvis is less than two inches, it is useless to try the expulsive power

of medicine until the child's head be reduced. In such cases this should be done as speedily as possible after the extreme narrowness has been ascertained, that the expulsive force of the Uterus and appendages may not be exhausted, and the operator be compelled to proceed with the forceps, or, if the room be not sufficient with the crotchet; for labour may be accomplished naturally after the reduction of the head, and will also succeed better than when any of the cranial bones are removed, which only renders the mother more liable to injury from those that remain. In many cases of deformed Pelvis, the forceps are of no utility, as they cannot be drawn when locked. What then should be done in cases of this description? It has been recommended to perform the Cæsarean operation, even in preference to the opening of the child's head. But as this is a subject of great importance in the science of midwifery, I shall suspend my further observations on deformed Pelvis, and the treatment in such cases to be adopted, whilst I enquire on what reasons, authorities, or precedents, this terrible operation can be recommended to the practitioner.

CHAPTER IV.

ON THE CÆSAREAN OPERATION AND EMBRYOTOMY—DEFORMED PELVIS—NARROWNESS SOMETIMES IN THE BRIM, SOMETIMES IN THE OUTLET.

No valid reasons, I apprehend, can be alleged for a preference to this operation to the opening of the child's head; indeed the reason of the case appears to me to lie all on the contrary side. I am at a loss for the least excuse for the practitioner, who would sacrifice the life of the mother that the child may be saved. To say nothing of the great danger of sacrificing both by so rash a choice; for I conceive the most resolute of our profession would hesitate long before he made up his mind to so cruel an expedient, and this delay would generally ensure the death of the child. But, supposing the infant could be saved, on what plea can we put the life of the mother in comparison with that of the child. If, by a contrary practice, we save one woman out of five, even to the destruction of five children, I conceive the advantage is still on this side. If the increase of mankind be the consideration, the woman saved may afterwards have five children, and these have children as early (within a few years) as the infant had it

been saved. Again, the woman may have a family, and thus a valuable life would be placed in the greatest jeopardy for the sake of saving an infant, which, in the lower ranks of life, if deprived of its mother, generally becomes a burden to every one concerned with it, and often a pest to society, from its want of maternal protection in its youth. I may then be allowed, I should hope, to plead the cause of the unfortunate mother, and to urge, as I most earnestly do, that every chance of life should, in all cases be given to the woman.

I would, therefore, in every instance, recommend the opening of the child's head, in preference to the Cæsarean operation; and we shall then, at least, not have to mourn over orphans deprived of a parent's care; by any calamity which our art might have prevented. Let the *Medical* practitioner then first open the child's head; endeavour to produce expulsive pains, by the means I shall hereafter point out, and should these not be attended with success, let the head be cut in pieces, which may be easily effected; it may, indeed, without difficulty, be pulled in pieces, so as to pass some of the most narrow Pelves. And let us hear no more of the Cæsarean operation, which I consider a disgrace on the profession of the Accoucheur, as scarcely an instance of recovery from it has occurred in modern times. If I did not entirely object to its adoption in any case, I could point out a more safe method of performing it before the head descended into the

Pelvis, and even after, than the plan now recommended; but I would rather caution the practitioner against using his art on such an unsuccessful operation.

Among the many published cases, almost all failed to relieve either mother or child, and we may suspect that the failures have been numerous which we have no account of, from the little leisure which medical men in extensive practice have to devote to writing. One case I would particularly refer to, because all the science of the profession appears to have been combined in the experiment, with how little success, the result most forcibly declares. It is recorded in the Medical Observations, Art. XXI. Vol. 4. performed under the superintendence of W. Cooper, M.D. communicated by Dr. Hunter. Drs. Ford and Cogan were called in consultation, and afterwards Heneiken, Wathen, Hunter, and six or seven more. The whole loss of blood did not exceed four ounces. In four hours after it was performed the patient turned sides, and died in twenty minutes. The child died also. I mention this instance the rather that I conceive, notwithstanding the phalanx of talent united in its superintendence, all was not done that might have been to save the woman. On reference to a plate which accompanies the article, the distance from the Symphysis Pubis to the Sacrum and lower Lumbar Vertebrae was one-eighth less than an inch, but there were two inches on either side, and I therefore conceive that if em-

bryotomy had been adopted in preference, the woman's life would in all probability have been preserved. Many cases of this operation, attended with the same fatal results, are given in different medical publications : in Daventer's *Accouchery* ; *Memoirs of the French Royal Surgical Academy*, Vol. I. p. 638. Vol. II. p. 303. *Edin. Med. Essays*, Vol. V. Art. 37. Vol. VIII. Art. 38. In all the recorded cases which we can rely on as true *hysterotomy*, or cutting through the Uterus, the deaths have been fifty to one recovery. And we may therefore pronounce it to be justifiable only in the instance of the woman's death ; in that case it may save the child, if performed with sufficient expedition. The operation is of ancient date, and is said to have saved many lives in different ages and nations. The circumstances which would seem to require it in the living subject, are, an imperforate Vagina, from contraction, cicatrices and tumours, or such narrowness of the bones of the pelvis, as not to admit the finger. Many cases of the successful extraction of the child from the Abdomen are recorded, but in these it has not been in utero ; in these I see little danger from the operation ; unless it be a case of lacerated Uterus, and the child thrown there ; then I would recommend the *accoucheur* to deliver *per vaginam* by turning, as in this case the danger is not so great as has been represented.

Cases are mentioned, in which women are said to have died for want of the performance of this opera-

tion ; but perhaps there were negligent people about them, and, by more early and decisive measures, they might have been delivered per vaginam. But such is the nature of this fatal operation, that, even where its application might be advisable, so much time is lost in coming to a conclusion on the subject, that it is generally too late to render any effectual relief.

M. de la Roche records a case, in which the child was saved, but the mother died, after five days of suffering ; the operation was performed on the seventh day of labour. The distance between the Pubis and Lumbar Vertebrae was two fingers. In instances of this sort, I am clearly of opinion, that the head should be opened. Whenever a finger can be passed up as a guide for the instrument, the surgeon should, in these extreme cases, always reduce the child. This may be easily effected, and it may then be taken away in pieces not larger than the finger, the flat bones passing through the long axis of the cavity of the Pelvis. In the last case noticed, the operation, if at all necessary, was delayed too long ; and if a woman could survive such pains and anxiety for so many days, the child might easily have been drawn in pieces through the Vagina. When the Vagina is impervious, I would try what nature could do ; as I have often found that uterine action has dilated very extensive cicatrices, when I should have considered it almost impossible. In cases of this description, then, let the accoucheur call in the best advice to

his assistance, before he decides on hysterotomy, as by skilful management, and by breaking down part of the adhesion by the scalpel, the child will often be pushed into the world. An examination per anum should be had recourse to, which will always elucidate the case.

In ventral conceptions the cæsarean section must be performed; but these are not to be confounded with hysterotomy, as the Uterus is never injured, and the danger is trifling, if the operation be performed in time.

Many cases of success in uterine section are recorded. Mr. Duncan Stewart gives an account of Alice O'Neal, of Tyrone, in which it was performed by a woman with a razor, and a person was sent a mile for needles and silk; after the operation the wound was dressed with whites of eggs, and the patient recovered in twenty-seven days. Dr. King mentions another successful case of a woman's performance, in which the child was not extra-uterine, as a leg presented in the Vagina. The Medical and Physical Journal contains some good remarks on its success. One case occurred in Rochdale; three in Lancashire; two at Manchester, in one of which the woman was supposed to be dying when the operation was performed. Mr. Barlow, of Lancashire, performed it successfully; but I have never seen the case. Yet, on the whole, I entirely agree with Mauriceau, Parey, Horn, and others, who condemn it as a barbarous and dangerous operation.

Many instances of its performance on the woman after death, by which the children were saved, are recorded by the ancients ; these are too well known to be particularly referred to here ; but in all the *well authenticated* cases of old authors, there is not one in which the woman was saved. In those, therefore, in which the woman has survived, it is more probable that the conception was extra-uterine. In cases of death, or supposed death, we should be cautious, as Vesalius and others have operated on women that were merely faint.

The deduction which Mauriceau derived from his own experience, that the death of the mother might be considered a certain consequence of the operation, has unquestionably been borne out by subsequent facts since his day. His system of Midwifery is indeed, on the whole, the best guide extant for the medical practitioner, and far preferable to any more modern publication on the present practice of the Accoucheur.

Those, who are advocates for the operation, must consult the ancient writers on the subject for successful cases, as our Monro, Hamilton, Hunter, Haighton, and the most eminent men of the present day, can give us nothing of the sort. All the women under their superintendance have died, though some of the children were saved. But we may here observe, that the supposed frequent success of the old practitioners has arisen from a confusion of terms in the translations from their works.

Hysterotomy and embryulcia are supposed to mean the same thing; and hence it has been asserted, that a section of the Uterus was formerly as common in Italy as the extraction of a tooth; and from the same mistake, I account for the assertion, that D. Somnius, of Bruges, extracted seven fœtus at different labours with success, both to the mother and child. The famed Oleus Rudbeck performed the same according to the translation; but in the original it is embryulcia, or embryotomy; the first from *ἐμβρυον* and *ελαω*, and the other from *ἐμβρυον* and *τεμνω*. Neither of which, it is clear, has any connection with a section of the Uterus or hysterotomy. This last expression is a term very seldom used by the old writers; and when it does occur, it is generally mixed up with cases of embryotomy, and appears, in many instances, to be a division of the vaginal parts. Any incision made in order to effect delivery, was termed sometimes embryulcia, but generally hysterotomy, and the expressions are often confounded in the very same case.

From this imperfect sketch of the relative merits of the two operations, and from the view we have taken of their probable success, I think I may fairly arrive at the conclusion which I have aimed at throughout; that it is the duty of the medical attendant, in all such cases as this chapter refers to, to endeavour to break down the child as small as possible, and then extract it by pieces; or when broken or divided in pieces, the expulsive force, if encouraged,

will very frequently be sufficient to effect a delivery. If the head especially be broken down, (as the long axis of the Pelvis is not affected by the deformity,) the child can always be drawn away by this method, whenever there is sufficient room to admit the finger as a guide for a small pair of scissors to divide the sutures, and break down the brain; when this is effected the bones of the skull may be drawn away in pieces by a small pair of forceps, leaving only the integument as a covering to prevent the edges from lacerating the softer parts. I am not acquainted with any well-authenticated case of deformity, in which I should have considered it impracticable to extract the child by these means; more especially when the uterine action is powerful it will be pressed into a very small compass; and if this be not sufficient, it can always be taken in pieces by a very small pair of forceps, with a few hours' perseverance and patience, taking care to lubricate the parts with oil, to prevent the frequent friction on the Vagina, and to be particularly cautious in extracting the pieces not to injure the soft parts.

We have no forceps or scissors recommended in modern publications at all calculated for the purposes above mentioned, if we except Dr. Davis's; and even these are of such a size as often not to pass when a finger can be admitted, and they are therefore entirely useless, as if two fingers can pass easily, the expulsive powers of nature may do the remaining part when the brain has been broken

down; what we are in want of is an instrument similar to the one Mauriceau describes as a crane bill in Book II. Chap. xxiii. marked F. G.; they are long forceps, with very deep and far separated teeth with blunt points, which I should prefer to be sharp and flat, so as to insinuate its point easily betwixt the scalp and cranium. The osteotomist of Dr. Davis would answer every purpose had it been slighter, and the top a thin edge, to have passed between the bone and scalp. The bone will come away very easily, and without farther trouble, on getting rid of the scalp. Whether the scalp will come away easily or not is out of the question, as it never should be removed at all.

The consequences of a deformed Pelvis become apparent either at the commencement or towards the termination of labour, according as the impediment exists in the brim or outlet. When it is at the brim the Os Uteri does not dilate readily, and when nearly dilated the head is obstructed and does not pass, the expulsive pains come on, the patient becomes fatigued, and the head stops. The patient then becomes free from pain, and perhaps sleeps; the pains return diminished in intensity, again cease perhaps for some hours, and again return until nature is exhausted through continued irritation, and the patient, unless the pains are increased and delivery accomplished, sinks perhaps for ever. The head cannot pass the narrow brim until it has been elongated; but on reaching the Pelvis, where it has

more room, it naturally resumes its former shape, if it be not forced on by the expulsive power ; if it remain there some time, and be gradually forced on by the power of the Uterus, the difficulty is generally overcome. Though we should not in these cases be in too great haste to consider the labour as nearly finished, for if the outlet be narrow, or the ligaments firm and rigid, the same process must be gone over again. However, we rarely find both parts narrowed, so that when one is overcome, we frequently observe that a couple of pains, if expulsive, will finish the labour, provided it be not the patient's first accouchment.

When the impediment is in the outlet, the reverse of the former symptoms takes place. The Os Uteri dilates quickly, the child is pushed down, the Pelvis filled, and one fancies the labour to be nearly finished ; when the pains become slight, and not very expulsive, we are led to examine why the child does not press on the Perinæum, and we then ascertain that there is a narrowness of the outlet. In this case the symptoms which indicate the impediment come on later than in the former. In both instances the medical attendant should be able to form a just estimate of the powers of nature when aided by medicine ; or, in the former case, he may be deceived by supposing delivery to be impossible ; and in the latter, if not well versed in medical accouchery, he will be led to conclude that the delivery would soon be effected and the labour easy,

when, in fact, he will find it necessary to have recourse to instrumental aid.

Baudelocque records an instance of this sort. The operator pronounced that the woman would be speedily delivered, because the child's head had descended with great facility during the first pains. He attributed the obstacles which soon after obstructed its course to a different cause, and rashly destroyed the child by using the crotchet when its life might have been preserved by other means. He waited two days in blind security, under the expectation of a natural delivery. The circumference of the superior strait of the Pelvis of this woman, when divested of all its coverings after death, measured fourteen inches, but the inferior was only nine. The distance from the point of the Sacrum to the Symphysis Pubis, as well as the interval between the Ischiatic Tuberosities, were but three inches; the cavity of this Pelvis diminished insensibly in breadth from one strait to the other, and was as regular as possible in its shape.

From this case it is plain, that had a medicine been administered which would have produced strong expulsive pains, delivery would have been effected in a few hours with perfect safety both to the mother and child.

CHAPTER V.

ON THE DILATATION AND SEPARATION OF THE LIGAMEN-
TOUS UNION OF THE PELVIS—MEANS RECOM-
MENDED FOR THE INCREASE OF UTERINE ACTION—
OBSERVATIONS OF DR. CONQUEST—RUPTURING THE
MEMBRANES.

BAUDELLOCQUE and others have asserted that the Symphysis Pubis, &c. do not give way so frequently, as is averred by some medical men. I am however of opinion, that the Pelvis is at all times enlarged during a severe labour. I can see no reason, why women from thirty-five to forty should have worse times than those who are younger, unless it arises from the greater elasticity of the ligaments. The wedge by which the bones of the Pelvis are separated is circular, composed of the child's head forced down by the uterine action and the abdominal muscles in time of labour. Every practitioner's experience must have furnished him with cases in which delivery could not have been effected without mutilation, even by the forceps, in which nature has done every thing by the powerful action of the Uterus and the abdominal muscles. The following case of dissection of a middle-aged woman, not in any way deformed, and about the middle height, by Dr. Mayo, may be adduced in illustration of this subject, and as a

confirmation of the opinion advanced. This woman died of Uterine Hæmorrhage quickly after delivery, at the full period of Utero Gestation; the Uterus being full without contraction, 6-10ths of an inch in thickness, its orifice open and circular, and two inches in diameter; both the Uterus and Vagina were filled with coagulated blood; the inner surface of the Uterus was covered with a flocculent matter, and appeared in places abraded, the injection escaping into the Uterus by the open mouths of the vessels; the muscles of the Abdomen appeared as usual, except a great distance between the recti. It was ascertained that the upper part of the Vagina, at its junction with the Uterus, could be exposed without injuring the Peritoneum, after an oblique incision through the fore part of the abdominal parieties. The Pelvis was well formed, and of the usual dimensions; but it was found that the Sacro Iliac union was loose, so that the Ilium and Sacrum could be separated on each side to the extent of a third of an inch on the fore part of the union. The Ligamentous Fibres running from the Ilium to the Sacrum were entire, but the usual connecting medium within between the bony surfaces was dissolved; the Symphysis Pubis was not ascertained; the Sacro Sciatic Ligaments were very lax. Cases have occurred in which nature has been assisted, when the Symphises would not give or stretch. Two instances of this kind are given by Dr. Manchini of Naples; one of which answered every expectation, but the other was not

quite so fortunate. A consultation was had recourse to before the operation was determined on, which consisted of a simple division of the Pubis; the patients were then placed in warm baths, and the further separation and dilatation of the bones left to nature. The children were both born alive. This was accomplished in one case in eight hours, after the division of the parts had separated an inch and a half; the expulsive powers of nature were forced, both to cause an overlapping of the fatal Cranium, forming it into a cone, and to effect the separation of the Pubes. In one instance the divided parts never reunited, not having been brought into opposition after delivery; so that the power of walking was not recovered except in a straddling manner. In the other the approximation and junction were completed. In these cases, then, we may observe, that had the expulsive force been sufficiently strong, the dilatation and division of the Symphysis Pubis would have taken place naturally; but it requires a great uterine and abdominal action to overcome the non-elasticity of these Ligaments in particular Pelves, and this forms the great majority of laborious cases. From Dr. Mayo's dissection we may conclude, that these unions are placed there purposely to assist a narrow Pelvis by their dilatation. A still more striking case is given in the posthumous works of the late Dr. Caleb Parry of Bath. A well-formed, moderately corpulent woman, pregnant for the first time, thirty-one years old, was delivered of a dead child in

fifty-eight hours after a very painful labour, during which she had no sleep. The Placenta required the introduction of the hand for its removal. Hæmorrhage not more than usual; bowels regular until within a few hours of delivery, when stools were passed involuntarily. In a quarter of an hour after delivery a rigor came on, which lasted many minutes; pulse before the expiration of twenty-four hours. 150—respiration hurried, with throbbing in the head. Opium, hyosciamus, antimony, and effervescing draughts, were administered; and she so far recovered, as not to stand in need of the Doctor's longer attendance. Twenty days after he was again called, during this time she had uniformly passed her motions involuntarily. This morning she complained of a pain in the groin, and the union of the thighs with the Pelvis, more especially on the right side, which was much aggravated by motion. She gave a very indistinct account; expressing a sense of pain and pressure about the groin down the thigh, in neither of which there was any perceptible swelling or redness—urine turbid. Purging, with opiates and effervescing draughts, was the principal treatment. On the day following yellowness in the Tunica Albuginea and other parts appeared—pain in the Hypochondriac region during inspiration. The stools and urine partook of the yellowness. After being moved she was seized with tremor and muscular convulsive spasms—the same treatment was continued with the addition of Digitalis for three days, when leeches

were applied to the Pubis without affording relief, it being at this time suspected to arise from the division of Symphysis Pubis; nothing was ascertained on examination, but the patient described her sensation as that of bones grating together. For two days the pains were excessive; after this, blood was extracted from the arm, having a concave crust of coagulable Lymph. She expired twenty-eight days after delivery, during a period of removal from bed. She was opened before Dr. P. by an able surgeon—the body was fat and well formed—the symphysis of the Ossa Pubes was divided through its whole extent, so that the bones separated 7-8ths of an inch asunder—the Ligamentous Union was gone, the front of the Os Pubis on the right was carious, and an abscess, full of matter, extended within the right Labium on the outside of the bone, down under the fascia of the thigh, to the great vessels. The Uterus was full three inches thick in its transverse diameter—near its fundus it was thick—it had within, near the fundus, the brownish red irregular prominence marking the attachment of the Placenta—there was no trace of inflammation about the Uterus, Ovaria, or Fallopian tubes; and no deviation could be observed in any of the Viscera.

From this, and many other cases, we may perceive the object of Pelvic separation; and I would further observe, that the case illustrates a conclusion which I have drawn from my own practice, that delivery, or rather dilatation of the Pelvis, is effected

with greater difficulty from twenty-eight to thirty-eight years than before that period, or even after forty, for women past forty, generally speaking, have quick labours, the Pelvis giving way as soon as the Os Uteri is fully dilated. In the above case, although the Ligament would not dilate or lengthen, the powerful force of the expulsive pains caused it to give way before the Uterus should be affected, so that the notion of the bursting of the Uterus from *excessive* action is mere fancy. When the Uterus is ruptured, it arises from irregular action. A case of ruptured Uterus is given in the Edin. Med. Journal, copied from the Annali Universali di Medicina, Feb. 1825, in which, from the child's feet being felt on the left side in the Hypogastric region, an incision was made there, and the child and Placenta extracted. The child died soon after, but the woman recovered in forty days, and in three years became again pregnant, and was delivered of a seven months' child, which lived fourteen days. She was in her forty-fourth year, and it was her sixth pregnancy. Now this case, and one I have met with in my own practice, in which the women have had children before, and have become pregnant and been safely delivered after the rupture, appear to me to prove that ruptures of the Uterus do not arise from excessive but from irregular action, from the contraction of one portion of fibre, whilst the rest does not—the part, therefore, which does not act gives way, the fibres, when not in action, being weaker

than the Os Uteri, although they are so particularly arranged, yet if the longitudinal fibres only act, the transverse may give way, and the Uterus be split. The great object we have to aim at, then, is to cause every part to act together, and we may then be assured, that if the ligamentous union of the Pelvis will not dilate, it will be forced asunder, as in the above case, before there will be any danger of rupturing the Uterus. All cases of ruptured Uteri that I have been able to collect, have occurred in capacious Pelves; the fear then of such an occurrence, can be no objection to the administration of a medicine to cause a great expulsive power, which I consider would rather prevent the danger of a rupture of the organ, and cause, in almost all cases, a dilatation of the Pelvis sufficient to pass almost any head after it has been properly compressed. All the debility after delivery exists in cases in which the Pelvis has been easily dilated, from its not recovering so quickly as the soft parts; but when the Pelvis does not give way, and the child's head is greatly moulded to accommodate itself to the size, let the patient's pain be what it may, she will recover in a shorter time than if the Pelvis had fully dilated. Indeed, as far as regards the pain, we very seldom find it particularly severe where there is no dilatation of the hard parts. When it continues very severe, the Pelvis must what the old women very wisely call unlock; and when the patient hears, as she says, her bones unjoint, we soon find the head descending into

the Pelvis, the pains effecting every thing required of them. How, then, can this dilatation take place in a narrow Pelvis, unless the expulsive pains are powerful? The production of such pains then, by any means in his power, is by far the greatest assistance to nature which can be rendered by the accoucheur. The discovery of some mode of increasing the uterine efforts has long been a desideratum among the more skilful and scientific practitioners. Friction was recommended by Power, which I tried extensively to no purpose, though in itself it can do no harm. Dr. Conquest has given us some remarks on the different means of accelerating expulsive labour; and though the Doctor's aim seems rather directed to knock down the plans of his medical brethren than to set up one of his own, as he appears to be a clever, scientific man, directing himself to the study of nature in all efforts, I shall briefly review the light he has thrown on this subject. I agree with the Doctor, that nothing more distinguishes the real scientific accoucheur than his waiting in the parlour in protracted labours, instead of being constantly by the bedside of the patient, who considers him very attentive from his frequent examinations; this of course must deprive the parts of the little mucus in these cases generally secreted. But I cannot go the whole length of the Doctor's conclusion, and say nothing is to be done. Before I possessed the medical means which it is the object of this publication to elucidate, and to free from all the objections and cavils of those

who have condemned it without that experience which a practical man has a right to expect;—when I found the Os Uteri thick, rigid, and unyielding, or when I found it deep, thin, and flaccid, I passed up the hand, and introduced first one finger, then another, and so on, until I had introduced the whole hand, then opening the hand, and fully dilating the parts, I withdrew it without lacerating the membranes, and never interfered again until I suspected the membranes required to be ruptured, or the head in perinæo, which in a few hours will assuredly be the case, if no impediment exist: thus we perhaps get over twenty-four hours of grinding pains in a few minutes, without the least injury to the woman, except a little more pain for the time, which is not to be put in comparison with ten or twenty hours' suffering, both of body and mind.

Again, the Doctor accuses his brethren of interfering by breaking the waters too early. He does not condescend to explain what he means by too early, and I consider it impossible that any one should fix any precise time, as it can only be determined by the practical man, and that at the bedside of the patient. In different cases, even with the same woman, it will be found, that if the membranes are lacerated when the pain is very little, or even before any pain at all, the patient will be delivered in half an hour; at other times the pains will continue very severe for several days. In some cases the pains will be severe for ten or twelve hours, the

membranes tense and tough, the pressure of the Uterus equal on every side, its mouth dilated no more than an inch, in such circumstances, if you rupture the membranes, the child may be born in two or three pains, or you may delay the delivery many hours by rupturing at that period. I was called to a woman in 1816, who had already been delivered of a child—they were aware there was another, and after waiting twelve hours sent for me. Before I examined, the nurse informed me there had been strong expulsive pains until within twenty minutes of the birth of the child. When I arrived the pains continued with great expulsive power. As I had before attended the same woman, I knew the bag was retaining the child by its firmness. I ruptured the membranes, turned round, (after withdrawing my hand to allow the water to pass off,) to desire the nurse to get every thing ready, and the child was expelled head, shoulders, and altogether at once, although the pain was partly expended before the membranes were ruptured.

In another case, in 1814, I was called to a person I had never before attended. The first child was born in a few hours after my arrival, it being seven miles from my house. I then found there was a second. On examination—the presentation was right, the membranes were tense, pains expulsive. I ruptured the membranes, expecting the child to be forced down immediately; but I was miserably disappointed, waiting hour after hour, the child descend-

ing very slowly, and was not delivered for fourteen hours and twenty minutes after, and then dead. On comparing the children's heads, I found the last to measure $2\frac{3}{8}$ inches in circumference more than the other. Now this was the impediment; although the dilatation of the soft parts had already taken place, this birth occupied nearly double the time of the former, because it required an elongation of the Sacro Iliac and Pubic Ligaments.

In another case, I was called to a soldier's wife, who was delivered on a march from Falmouth to Exeter, to take, as the nurse said, the after-birth. On examination, I found there was another child. On enquiry, I ascertained the first labour to have been finished in an hour, but in the second there had been strong expulsive pains for seven hours—the membranes were very tough, and the usual mode of scratching them with the finger-nail roughed would not succeed in lacerating them. I was then forced to use a knitting needle, when a large quantity of water was discharged, and the child brought into the world by two expulsive pains. By the bye, another woman who came with her was so frightened, as to cause a rush of blood to the Uterus by its partial suspension of passage through the lungs, and was thus prematurely delivered of a seven months' child. Now if Dr. Conquest would lay down a precise rule for rupturing the membranes, his remarks, though then somewhat severe, might have a colourable pretence; but under such circumstances as I

have detailed, no one is authorised to condemn an operation which will not admit of definition or determination.

On the use of the lever I entirely agree with the Doctor ; I consider it an instrument which should never be used by the accoucheur. In the first place, it is of no use except to alter the presentation, and this can always be done by the finger, and that often with sufficient force to injure the soft parts of the mother ; if the lever then be used which must have a bearing on the patient, the pressure of this instrument on the soft parts will occasion great danger from inflammation, sloughing, hæmorrhage, and mortification, after delivery.

As to the use of spirits, if given without dilution when the Uterus is contracting, so as to dilate the Os Uteri, their utility is counterbalanced by the rigidity caused to the Os Uteri by its stimulating power. But when administered in a large quantity of water as a diluent, so as to take off the sickening effect of the warm water, I think it is often of the greatest advantage, causing an increase of the circulating fluid, which cannot be carried off by the kidneys, as they very seldom secrete at all, or in very small quantities, during labour, the increase then must be thrown on the Uterus, and excite it to action. It was indeed the best means we were possessed of to accelerate lingering labours, before we were acquainted with the good effects of the Ergot of Rye.

With respect to calling the abdominal and dia-

phragmatic muscles into action by voluntary means, and forcing down the diaphragm by retaining the breath and contracting the abdominal muscles, I allow it is of no use, and indeed may be injurious, as it produces debility, until the Os Uteri is dilated, and the head begins to descend into the Pelvis. But I have often found, that when the dilatation of the Os Uteri is about the size of a wine-glass, immediately after the discharge of the waters, by directing the woman when the throes come on to force down, the child has descended, and expulsive pains have come on, until the child has been delivered; but if after once or twice forcing down, the proper expulsive throes do not come on, it is better to desist.

Some of the Doctor's other remarks on allowing the head to remain in a wrong position, or jammed into a part through which it cannot pass, are cases not of disputation, but of ignorance, and must be condemned by every one. But with regard to the extraction of the Placenta and pulling on the Funis, I advise the accoucheur to pull on the Funis gently, and make pressure on the Abdomen, immediately after the birth of the child; by this he will prevent irregular contraction of the Uterus, and all danger from hæmorrhage. When Dr. Conquest speaks of opium, and its retaining clots of coagulated blood, he had forgotten surely, its very stimulating effects in cases of accouchery, and more especially its power of relieving the Uterus from spasmodic contraction of one

part, and causing it to contract as a whole. He has in opium given up the only article on which we can depend for the expulsion of coagulum, for the prevention and stopping of hæmorrhage, and for producing sleep and rest after fatigue and anxiety, and for all these important objects nothing can be named that will bear any comparison with opium.

CHAPTER VI.

THE VARIOUS CAUSES OF LINGERING LABOUR, AND ITS TREATMENT—INSTRUMENTAL AID RARELY NECES- SARY.

A GREAT variety of difficult or laborious cases which require instrumental aid are enumerated by different authors; these I shall endeavour to review as briefly as possible, and will shew that most of them may be overcome by skilful management, when the presentation is proper, without even the assistance of the hand.

1st, Labour pains protracted or delayed by debility. All laborious births unquestionably demand great attention to the strength and powers of the patient, that we may be able to render assistance just at the time it is required, and to take advantage of every assistance which nature can give to the case. Delivery, we may assert, will always proceed well, if the woman be young, her constitution good, the presentation right, and the Pelvis capacious, provided there be no remarkable deviation in the size and shape of the child. In cases of debility then, as described by authors, arising from disease or flooding, which is always alarming to the timid and unpractised accoucheur, if the bursting of the mem-

branes do not produce expulsive pains, I would not even wait for medicines to take effect, either to stop the hæmorrhage, or increase the throes, but at once introduce the hand, turn the child, and bring it away, as the only safe treatment both to the mother and child.

2ndly, Epilepsy. Here I would pursue the same plan, and turn; then, if in the last months, as well as in puerperal convulsions, give musk and opium, keeping the patient afterwards cool and quiet.

3dly, Irregular pains and spasms, by keeping up mental and bodily irritation. Here purging with castor oil, and giving large doses of opium, will give quiet, until the proper labour pains come on.

4thly, Debility and faintness, not to be referred to any particular cause, will occasion protracted labour.

5thly, Inflammatory habit in the strong and robust, causing a determination of blood to a different part. Here venesection, castor oil, and cooling diet, are called for.

6thly, The practitioner may often be deceived by spasms and pains of the bowels before labour pains come on, arising from the descent of the Uterus;—these may be taken for labour throes, as they are attended with nausea and vomiting. This may occur a month before the labour, but in this case there is a constipation of the bowels, tenesmus, and sometimes thin stools, and, on examination, the Os

Uteri will be found not in the least dilated, and even with its long neck. In this case we may venture to affirm that labour will not proceed, but these pains ought to be mitigated by glysters, castor oil, and opiates, or they will otherwise continue until the natural pains come on.

Hectic or Pthisical patients are said to have long lingering labours, but I have never found this to be the fact. I have met with several cases in which consumption has been delayed by Utero Gestation, although the patient was within a few weeks of death at the time she first proved to have a Fœtus in Utero. In these the Os Uteri gave very little resistance to the child, the Perinæum was thin, and the child born in half the time, and with less pain, than in any former accouchement. In these cases, the patient must be supplied with cordials and nourishment which are proper in all cases of debility. The hectic patients I have attended have never survived three weeks, but often died in less than eight days after delivery.

Sthly, Passions of the mind, and mismanagement of the labour, will frequently delay the pain for several days. When, therefore, a woman is in labour, we should allow no frightful stories to be related in her hearing, but should conceal every thing which has a tendency to throw the excess of blood on the lungs, or any other part, as in such cases labour will not proceed, unless you can again stimulate the Uterus, and cause a flow of blood to it. It is often several

days, and I have known it weeks, before the shock has been gotten rid of, and the labour has proceeded. I was called, July 27, 1826, to a woman of the name of Jenkin, who had severe grinding pains when I arrived at 3 P. M. A woman had been brought to her house to be confined of an illegitimate child, who had expected to be delivered in May, but was mistaken in her reckoning. This woman, named Ding, was so frightened at the pain and suffering of Jenkin, that she was taken in labour at 4 P. M. The thoughts of their being both brought to bed together so hurried Jenkin, that she got perfectly well, and Ding was delivered, at eight o'clock. The labour pains having quite left Jenkin, I heard nothing more of her, but understood she had been delivered three days after, so quickly, as not to allow time to call any one. Hence we see the blood may be impelled to the Uterus by fright, and bring on action, and that it will drive the pains by abstracting the blood from the Uterus to other parts. In Jenkin's case I found the Os Uteri dilated to the size of the top of a teacup, and in this state it must have remained until delivery came on.

9thly, Cases of rigidity of the Os Uteri, constriction, firmness of the ligamentous part of the Pelvis, and also from flaccidity of the Os Uteri, which is worse than rigidity. In cases of this kind I have been called, more particularly to Grose, July 18, 1816, I found grinding pains, with rigidity of all

the soft parts. I ordered her to be put to bed, and kept quiet; the pains continued until the 21st, when she was delivered naturally, without assistance of any kind. At this time I had scarcely seen an account of the Ergot of Rye, and I then found labours of the same description in women from thirty to forty, continue from three to five days, but, above forty, I have almost invariably observed the delivery to have been effected as quickly, and with as much ease, as in younger females. To Patients of this kind, before I had the Ergot, I administered a quantity of diluents, which frequently, when they could be kept on the stomach, relieved them of forty or fifty hours of suffering.

Such are the cases, which in one out of ten, are said to require instrumental aid, principally because medical attendant accoucheurs choose to convert themselves into mechanical artists. By this practice the life of the child is frequently destroyed, and considerable injury often accrues to the mother from the use of the lever and forceps, which are not necessary in one case out of five hundred in which they are at present used. I entirely agree with Dr. Osborne, that in these cases we ought to have nothing to do with mechanical art. Patience and medical means are all we ought to depend on, and nature, if assisted by medical treatment, will overcome them all—even the worst of them require nothing more than turning. If allowed time, nature will in all these cases produce extraordinary effects,

the bones of the head will not merely be moulded together, but often be formed into a cone, that they may the more effectually form a passage for the delivery. Nature then should be allowed to exert her utmost to overcome the difficulty, before we permit mechanical art to interfere. As long as the Patient's pains continue strong, and her strength remains, no kind of instrument should be had recourse to, and even after the labour pains cease, we should await the effect of Opium, Rest, and Cordials, with nourishment, such as Panada, Gruel, &c. from which I have witnessed surprising results. Dr. Osborne informs us, that out of 1,600 cases, he has used instruments in three only, and in one of those he considers unnecessarily. How different is this from the general modern practice, in which we are informed, by eminent men, that they have recourse to instruments in one case out of fifty. In the country, in which my experience has been principally acquired, I verily believe that instruments are not required in one case out of thousands. Some years ago I used them frequently, but it was rather from fear of my patient doing otherwise than well, and to save my own credit, than from the necessity of the case, as, in the opinion of the ignorant, the frequency with which the operator has recourse to instrumental aid, is considered the best proof of his skill and attention.

CHAPTER VII.

GREAT ADVANTAGES FROM THE USE OF THE ERGOT OF RYE—ITS GENERAL INTRODUCTION WILL SUPERSEDE THE USE OF THE FORCEPS—EXTRAORDINARY CASE OF RECOVERY FROM PREGNANCY WITHOUT DELIVERY.

EVERY candid and honest Practitioner will admit, that if we could discover any treatment which would effect delivery with safety to the mother and child, it would be preferable in other respects, and tend to the comfort of the Medical Practitioner, to resign the Midwifery branch again to the Female Attendant, except in some particular dangerous cases. To increase and quicken the Uterine action, and thereby facilitate delivery, I have tried various vegetable and mineral substances. Many of the vegetables have possessed this power to a certain extent, but the minerals produced no effect whatever. These endeavours led me immediately to notice the accounts of the Ergot of Rye, and to subject its pretensions to the test of my own experience. The result has been, that after its successful application for many years, I am now fully convinced that it is a safe and efficacious medicine in accouchery cases; possessing all the properties which a Practitioner could desire.

Its effect on the contraction of the Uterus, both before the expulsion of the Fœtus, and after this has been accomplished, is such as to remove all danger attendant on the woman, quickening and facilitating the delivery, and preventing spasm or flooding afterwards. I am of opinion, therefore, that as soon as it is generally known in female practice, it will supersede the necessity for male practitioners, except in a very few instances, where the disproportion of parts is very great, or the presentation such that delivery cannot be effected without turning; in such cases the medical man will still be called in, but these will not occur in more than one out of 200 of the medical man's present accouchery patients. This, I have no doubt, will be hailed as a great relief by the generality of the Surgeon Apothecaries in country practice. It may be considered as somewhat extraordinary, that the virtues of the Ergot should not have been known until the present century; had they been discovered before, the Surgeon would never have acquired his present practice in Midwifery—the Females would still have retained it, and the lever and forceps would never have been invented—the new practice would not have superseded the old, which was a far preferable system, and most unquestionably so now, when we have the Ergot to assist in cases of sluggish labour, from rigidity of the Ligamentous, and other soft parts of the Pelvis. Before the Ergot was administered, the forceps were a necessary appendage of Midwifery practice; indeed

without them the surgeon could scarcely have superintended this practice together with his other engagements. When the Os Uteri was fully dilated; and the friends and patient most anxious to have the delivery effected by any means in the power of the Accoucheur, it cannot be expected that with the means in his possession of expediting the labour, he should prefer waiting twenty-four hours, during which his attendance is required in various other places, rather than have recourse to the forceps which have perhaps frequently relieved him in similar circumstances. Had not the invention of the forceps by Dr. Chamberlain preceded the discovery of the virtues of the Ergot of Rye, it would have been received as the greatest boon ever given to the medical world. That its benefits have not been more generally acknowledged, may, perhaps, in a great measure, be attributed to the prejudices of self-interest, which must clearly discern a falling off of fees when Ergot shall have been extensively introduced. When Rye comes into general use, the medical man will seldom be called to apply the Forceps or the Vectis, and we may then perhaps find many a Forceps in the state of those presented to the Medico Chirurgical Society by Mr. Cansardine of Woodham Mortimer Hall, in want of fresh polishing from long neglect. In twenty years I should not be surprised if the Forceps be known only by name, as in cases in which Ergot cannot be administered turning is all that is required, this may be effected as easily when

the child's head is in the perinæum as at any other period, and can be done with as much safety as in any earlier stage. Except then in the rare cases in which the Cæsarean operation was formerly recommended, I conceive there will now be no occasion for instrumental aid in cases of Midwifery. And were the Cæsarean section the only mode of delivery in these extreme cases, I should not hesitate to discard instruments altogether, as I have no doubt more women would recover without being delivered at all, than have been saved by the Cæsarean operation. I have had several very curious cases on this subject, one I will here relate. A woman was taken in labour, and a medical man continued with her all night. The pains continued slight during the day, and passed off entirely the following night. From this time she felt nothing particular, but continued rather weak for ten weeks, she then applied to me for a pain in the back. The bowels were lessened in size according to the account of her attendants, but she still insisted that she was with child, although she had not felt it since, she said, she was in labour. I could not help smiling at the woman's notions. I was again called to her, when she complained of very cutting pains in her back, and soon after I left her, there was (for the first time since the period when she stated herself to be in labour, an interval of thirteen weeks,) a discharge of a highly offensive fluid, they called it blood, but I did not see it. A week after this, she called on me with a thigh bone

of a foetus, and several small bones resembling the metatarsal; she continued to bring off bones sometimes flat, sometimes cylindrical, for more than twelve months, walking five miles to market every week during the latter part of the time. She now enjoys perfect health, but has not conceived since. I have not the least doubt, that more cases of this kind where the woman recovers, might be adduced than from the Cæsarean operation. This woman, whose name is Pope, resides at a place called Old Cardynham. Had Ergot of Rye been then in use, she would have been saved twelve months of great pain and suffering.

CHAPTER VIII.

ERGOT—ITS PRODUCTION FROM RYE AND OTHER PLANTS
—ITS GENERAL APPEARANCE AS GIVEN BY DIFFERENT
WRITERS, AND OBSERVED BY THE AUTHOR—MEDICAL
PROPERTIES, WHEN FIRST OBSERVED—DIFFERENCE
OF OPINION WITH RESPECT TO ITS POISONOUS QUALI-
TIES.

RYE, from which the substance in question is chiefly obtained, is a plant so generally known, that it would be superfluous to enter on a particular description of it. It is still extensively used in many counties in England, as bread-corn, generally mixed with wheat, in the proportion of from a third to a sixth. Formerly it was very generally grown throughout the kingdom, and in districts in which the houses are usually thatched; though Rye is altogether unknown as an article of cultivation in the present day, the earlier coats of thatch on old houses are found to be composed of Rye-straw. It has most probably been discontinued from the circumstance of its causing in certain years diseases of the vital parts, and gangrene of the lower extremities, in places in which it has been used as a common article of food. At other times it was found

particularly wholesome and nutritious, free from any deleterious qualities whatever, and as the causes of this variation in the same article were entirely unknown, the necessary consequence has been, that it has gradually been discontinued as an article of human food, and is now more frequently cultivated as an artificial grass for early spring feed.

The great variation in the qualities of Rye, it is now well known, arose from the proportion of what is called Ergot, or spurred Rye, mixed with the sound grain. The plant grows with a bearded ear, which, when ripe and sound, bends downwards, it flowers whilst the ear stands erect, and if Ergot be formed instead of sound grain, it continues still upright. Most writers on this subject inform us, that the Ergot is formed in consequence of the ear not bending downwards, but surely the contrary is the fact, the ear does not bend down, because the Ergot has been formed, which is specifically lighter than sound corn. The Ergot appears to be produced principally on the weak and immature plants, and hence we find a considerably greater proportion of it among Rye sown in the spring than in that sown in the autumn. By some means at present not at all ascertained, most probably either from wet or from its impregnation with the Larva of some insect, certain grains in an ear, generally a whole row, and often the whole ear become elongated and grow horned from half an inch to an inch in length, these are the parts which are known as Ergot of Rye. In shape it is almost

square, gradually narrowing towards the top, and ending in a blunt point, it has a slight longitudinal indentation on each side, through these it will readily split, and internally is of a fine white with a slight blush of pink. It is generally soft, and if not kept very free from atmospheric air it quickly absorbs moisture, and small crystals are formed in its cortical parts when again dried. Its acquiring damp by any means very soon effects its decomposition, for after being dried a second time its virtues are almost entirely destroyed. When allowed to become damp, it is liable to be attacked by a small insect, which will be found to have hollowed out its inside, but after it has been twice subjected to dampness and dried again, it remains enlarged, and no longer produces this insect. This circumstance strongly supports the opinion of its origin being derived from the larva of an insect, which, on the putrefaction of the grain, is brought to life, and found imbedded in its interior. All the grasses are subjected to a disease of the same kind, to which Pathologists have given the name *Clavus*. Dr. Higelow describes it as one or more seeds usually enlarged or elongated, and projecting from the spike or panicle to which they belong, form irregular, texture light and brittle, of a dark colour, an unpleasant taste, and incapable of germination. Nearly all these distinctive marks any one acquainted with Ergot would at once pronounce erroneous. Instead of one or more seeds in an ear, it frequently happens that the whole ear is ergotised—

its form is as regular as that of any grain—it is certainly lighter than sound grain, but as to its being brittle unless it has been artificially dried I have never found it so, and even then it will acquire so much damp from twenty-four hours exposure to the atmosphere as to become quite soft—its taste is more like the kernel of a nut than any thing I am acquainted with, and not at all unpleasant—its infusion could not be distinguished from that of new hay—its dark colour lies merely on the outside, as its interior is of a fine white with a faint blush of pink. It has no shell or cortex like oats or wheat, but from being a decomposed grain its outside acquires a dark blackish colour.

Of all grain rye is certainly most liable to this disease, wheat, barley, and oats are affected by it, but far more rarely than rye. Most of the grasses are also subject to it, more especially the genus *Alapecurus* or fox-tail grass.—From this the American authors allege the best Ergot may be obtained.—Several varieties of the *Arundo* have also been observed to produce it. The *Diapenidion Reed* was in the *Pharmacopæia* of 1660 forming part of the composition of an Electuary.—It is more than probable that this Electuary owed all its medical properties to the presence of Ergot.—The uncertainty of its operation caused this medicine to be laid aside.—One party held the *Diapenidion Reed* to be a medicine of great value in promoting child-birth, whilst others declared that they could discover no effect at all

from it.—In the same manner burnt sponge has been recommended by some medical men as a certain cure of Brouchocele and by others is said to produce no effect whatever. This uncertainty is now known to have arisen from the circumstance of some burnt sponge containing no Hydiodic acid in which its virtue entirely consisted. The Diapenidion was recommended to stop the overflowing of the menses and spitting of blood, and is described as purging according to the quality of its ingredients, in which we may observe a doubt of its certainty of operation, though the College were ignorant of the cause of its variation. The virtues of this medicine as described, agree precisely with the modern experience of the properties of Ergot.

Another genus of the same class and order, the Lolium or Darnel as its derivation imports from δολιος deceitful or adulterine, the δ being changed into λ *euphoniæ gratiâ* was found in ancient times to be affected with Ergot. It is by Gerrard said to cause drunkenness when eaten in hot bread, when taken in wine it stayeth the fluxes of the matrix, and according to Dioscorides a fume made with it, barley, frankincense, saffron, and myrrh, applied to the belly healeth conception, and facilitates the birth. Coles says that its seeds applied stoppeth the courses.

It is evident then, that although the peculiar kind of virtue inherent in these plants was unknown, its effects were understood and guarded against by the above explanation of different authors, so as to pre-

vent its use, more especially in hot bread. The effects are exactly those of Ergot though less marked from its being mixed with grain as food. Although some of the plants already noticed are more subject to the disease called Ergot than Rye, the diseased state of this grain has certainly attracted the most attention from medical men. Spurred Rye under the name of diseased grain has been noticed in every country of Europe.—Certain diseases have been observed to be prevalent when this diseased grain became from any cause abundant, and it was therefore a subject of national importance and of great interest to the community at large. Many different opinions have been formed as to its character and effects, a great variety of treatises and papers having been published on the subject of this diseased grain.

In America it has been long used as medicine by Hosack and others. Their attention was first directed to it by an epidemic which was attributed to Rye, when it was surmised that its injurious effects arose from a diseased grain, and after various experiments the Ergot and its injurious effects became generally known and understood.

A great many attempts have been made by different medical men to ascertain whether the Ergot is to be considered as a poison or not. But the results as they have been reported to us have been so very different, that no conclusion can fairly be drawn. One party declare it to be perfectly innocuous, whilst others hold it to be highly poisonous. Parmentian

gave the Ergot both whole and made into bread to pigeons, fowls, and dogs. He took * half a drachm himself daily for a week fasting, and ate the flesh of fowls fed on it without the least inconvenience. Dr. Murray gave it to two beggars, who took every day three drachms in bread for eight days, and remained all the time in good health. On the contrary; Read says a pig fed on bran and Ergot died gangrenous on the nineteenth day, and the Abbé Tessier gave it to ducks, turkies, and pigs, to all of which it proved a deadly poison. From these then we can derive no information on the subject, but an extension of enquiries into this substance in this kingdom will soon determine its real qualities, and afford the practitioner such a knowledge of its properties as may direct him in its further administration.

* See at the end of the Cases my own experiment. I took eighteen drachms in fourteen days without the least inconvenience.

CHAPTER IX.

THE EFFECT OF ERGOT OF RYE ON UTERINE ACTION—
SUPPOSED DANGER IN ITS USE—GIVEN IN AMENOR-
RHŒA—CONSIDERABLE QUANTITIES MAY BE TAKEN
WITHOUT INCONVENIENCE—PROPER DOSE FOR PAR-
TURIENT FEMALES—ITS PECULIAR EFFICACY IN FA-
CILITATING CHILD-BIRTH—HAS NO EFFECT IN ABOR-
TION.

THAT particular property of Ergot which forms the subject of this work, its power of exciting the Uterus, and its more marked effect of increasing the action of the Uterus, was first noticed by Dr. Stearns of New York in 1807.—It was afterwards taken up and investigated by Dr. Prescott of Massachusetts in a pamphlet in 1813.—Until the last three or four years this medicine has been used almost exclusively by the American physicians, it was first introduced by them to the notice of Europeans, particularly by Dr. Prescott's pamphlet which has been reprinted in England and translated into French by M. Charbounier. Dr. Prescott says it is now well ascertained that Spurred Rye has the power of increasing parturient pains, and causing the Uterus to expel the Fœtus more quickly than it would other-

wise have done. This effect, he says, it sometimes fails to produce, which I believe to be very rare indeed if genuine fresh Ergot be used, but its failure Dr. P. very truly remarks is not more frequent than that of almost any other medicine with which we are acquainted. Dr. P. further asserts that its character is so well established that a majority of the practitioners in Boston and throughout this state are in the habit of employing it where medicines of this sort are indicated, and I perfectly agree with the Dr. that it is a valuable addition to our present medical agents. The Medical and Physical Journal has for the last dozen years contained various cautionary hints on its administration. These papers have led practitioners to conclude that it has proved injurious to the mother, and still more often to the child; when administered at too early a stage, or where considerable obstacles to delivery exist, it creates unnecessary suffering to the mother and endangers the child's life, the contra indications to its use are the early stage of labour, rigidity of the soft parts, unfavourable conformation and wrong presentation. It has been owing to remarks of this sort that medical men have been deterred from its general adoption—but I hope the perusal of this work, and the great number of cases hereafter detailed, will satisfy the profession that it will be productive of evil in no cases except those of bad conformation, and wrong presentations which require turning.

The Medical Journal says it has been given to a

considerable extent in Amenorrhœa with various success in the hands of different medical men, some applauding it, and others condemning it as a virulent poison, whilst others again say it is perfectly inert and produces no perceptible effect on the constitution or the complaint. Dr. Thatcher names several cases in which the Catamenia had been restored by a small quantity, a drachm of Ergot. Dr. Preseot, on the contrary, and my experience confirms the opinion, holds it to be of no utility whatever in obstructed Catamenia. Dr. P. administered an ounce in a week in substance, now frequently from its heating quality it may have the effect of increasing the appetite and strength, and thus the effect may be produced, but not by any specific effect on the Uterus. Dr. Randale in a case of Amenorrhœa gave six ounces of Ergot, the patient took two ounces the first time and four the second, it was prepared by boiling an ounce of Ergot in a quart of water until it became a pint, the first quantity was taken in five days, the second in less than four, more than an ounce being taken in a day. The patient was relieved, no unpleasant symptoms occurred, and the patient has been in perfect health ever since. Mrs. T—— took Ergot at three different times at the rate of four drachms per day, one ounce relieved her the first time from Amenorrhœa, the same quantity the second time, and two ounces the third time: no untoward symptoms happened to her on any one of these occasions, enjoying her health as well as usual.

Dr. R. says he administered half an ounce a day to another person for several days without any unpleasant symptoms, though without the desired effect. The symptoms in the preceding cases were headache, increased heat, and occasionally hypogastric pain, not noticing sickness at all times. I have quoted these accounts to shew to what extent the spurred grain may be administered without the least injury, producing merely a little temporary inconvenience, which occurs at the time it is taken, and leaving no unpleasant consequences whatever. The American writers hold it to be entitled to the name of Emenagogue as much as any of that class, which are all very uncertain in their effects. They all agree that infusion and decoction extract all its active properties, that in this state it acts more quickly, and therefore is the best preparation of it for parturient women. Dr. R. commences with a drachm in parturient cases, which I consider a large dose, half a drachm I have found generally sufficient.

The Medical Repository * informs us that Ergot was used in France half a century ago for expediting labour, and also in America. It does not however appear to have been so employed by medical men at that period, and in the hands of the females it was observed to produce harm, or was considered injurious, and therefore fell into disuse, and was entirely forgotten, until Doctors Stearns and Bigelow res-

* Vol. XXIV. page 265.

cued it from the grasp of the illiterate and empirick professor and called it into regular practice. It is said by the writer in the Repository to produce one long continued effect on the Uterus for more than an hour, or until the contents of that organ be expelled—in many cases I have found its effects continue full three hours, and longer than this it will seldom continue, although in consequence of some mechanical impediment the birth may be delayed to a later period, but in cases of such impediment it is stated to be productive of injury both to the mother and child, but this is a conclusion which I do not admit, as I have given it in * wrong presentations purposely to witness its effects, and have even turned whilst its action on the Uterus has been most marked. This writer proceeds to observe, that when the presentation is natural, the parts properly dilated, and the progress merely delayed for want of action, that a few doses of Ergot exhibited at proper intervals revive, *it is alleged* (so that he does not speak from experience) and augment the vigour of the pains, so as to accelerate the birth of the child in a surprising manner. Now with regard to want of action, when there is a proper dilatation and sufficient room, we had all we required without the Ergot, for in such cases $1\frac{1}{2}$ of brandy in six ounces of water, repeated every fifteen minutes, would be certain in a short time to bring

* See Case 7.

on Uterine action. The great value of the Ergot consists in its efficacy in cases of non-dilatation of the Os Uteri, in these its power is most conspicuous, as it will produce its dilatation in a few minutes, which otherwise would require many hours. The repetition of the dose I have not found necessary in more than one case in fifty, to require it at all, there must be a great rigidity of the Ligaments, Muscle, and, in fact, of all the parts both within and without the Pelvis.

It has been administered in abortion, but I agree with the above writer in the conclusion, that for this purpose it is altogether * inefficacious. His opinion is, and my own coincides with it, that it does not bring on action, but increases it, or renews it when suspended, but he does not speak with much confidence, as he says in two or three instances it has produced peculiar effects. It is recommended to be administered in a fine pulverized substance, or in aqueous infusion. The powder is certainly objectionable, as it more frequently causes sickness, and the quantity, a scruple of the powder or a drachm in infusion, recommended as the dose, is too great, half this quantity, as I have already observed, will be found quite sufficient.

* See Cases 21 and 29.

CHAPTER X.

AN EXAMINATION OF THE OBJECTIONS BROUGHT AGAINST THE USE OF THE ERGOT OF RYE BY DR. HALL—SAID TO ENDANGER THE LIFE OF THE CHILD.

As the practical remarks on the Ergot of Rye by Dr. Hall of St. Albans, with suggestions with regard to its *modus operandi*, first induced me to consider of the propriety of this publication, I shall proceed briefly to examine the Doctor's objections to its use. I hold the Ergot to be a most valuable acquisition both to the patient and accoucheur, and should therefore be sorry that it should be sunk in the estimation of the profession by the Doctor's publication. I am not at all acquainted with Dr. Hall, but cannot help thinking he has undertaken to condemn this medicine without sufficiently understanding its merits. I pretend to no superior knowledge of its virtues and efficacy other than that I have derived from a very extensive use of the article, and the profession must judge from the detail of cases accompanying this publication, how far the results of my practice correspond with the accusations brought against the Ergot by Dr. Hall. In the first place, it is represented by him as a poison. I should feel obliged to the Doctor to produce a fatal case from

its administration. Whether it would prove poisonous from long continued use, we have already seen, is greatly disputed by different parties, and I feel assured its more extended exhibition will utterly destroy all notion of its being in any wise injurious, in the small quantity necessary for a dose in parturient cases. Again, its *modus operandi* is said to be as yet undefined. This, I cannot admit; I consider it to act by contracting the muscular fibre of the extremities, and by causing a greater quantity of blood to be determined to the Uterus. Its power is also said to admit of no control, to this I answer distinctly, that Opium will be found to stop its effects within a very few minutes. I allow, with Dr. H., that when administered it has created astonishment; but I do not admit that its powers are but imperfectly known, as I have been in the habit of giving it for many years. It has been viewed as inert on mother and foetus, and the only effect it has on the mother, is to cause deadness on all parts of the body, and on the child nothing more than what arises from the great pressure of the Uterus. It is stated to be equivocal in its character, whereas there is no medicine that has a more decided effect, not even a purgative—it is also said not to take effect always on the Uterus, but to bring on distressing symptoms—my experience has shewn me none of these, except vomiting, which is almost a certain attendant on the rapid dilatation of the Os Uteri. Another objection is, that when the child is

born any length of time after its administration, it is always still-born. This opinion of its effects I consider to be altogether erroneous. The reason, why the death of the infant has been attributed to it is, that it is only administered in long, lingering cases, in which it is well known the child is frequently still-born without the exhibition of Ergot. It is asserted as a certainty, that it has destroyed life—this I do not credit: I have given it largely and frequently with the best effects, and have in no case apprehended such a result *from its use*. But as this is a question of great importance, it will be necessary to examine it somewhat in detail.

It is assumed that the poisonous effects of Ergot are conveyed through the blood by the stomach, retarding the circulation, contaminating the blood, and thereby killing the child. The case of vesication, and its tendency to produce gangrene, are brought as proof. I have already observed, that I consider it to operate on the Uterus by increasing the circulation of the part. If it operate, as alleged above, why has it no effect until the last months of pregnancy, and frequently even not until nature begins the work, bringing on contraction from a power or cause which we are unable to unravel. The same woman, we find, will go at one time seven months, at another eight, at a third nine, on a fourth occasion perhaps nine and a fortnight, it cannot arise from time therefore. And in one case the child may be five, in another eight pounds, and sometimes

the water an ounce, at others two or three pounds ; labour therefore cannot come on from over distension, when the neck of the Uterus is not obliterated. It arises, I consider, from some peculiar stimulus contracting the circulation. The blood is thrown on the Uterus and causes its contraction, as we well know that when blood is withdrawn from any part it ceases to act from want of the vital power to support the nervous. On the contrary, if any part be overcharged with blood, as the eye for instance, we may observe how powerfully contraction comes on to exclude the light or any thing obnoxious to it, in the same manner when the peculiar stimulus comes on, the placenta becomes pressed on by the action of the Uterus, and of course the flow of blood through it cannot be so great, the return also from the child must be lessened, if not in some cases nearly stopped by the pressure, else what use do we attribute to the Liquor Amnii, which no doubt nature intended for the protection of the placenta from pressure, in order to the full development of the fœtus. Or if we suppose the child to be killed by the poisonous effects of Ergot in the blood, why is it not injured by various things which enter the blood, as turpentine, &c. ? or, again, how can we account for its being administered during the early months of pregnancy, with advantage to the development of the fœtus ?

That the child is expelled after the evacuation of the Liquor Amnii, I conceive clearly to arise from

the pressure of the Uterus on the placenta, (and this will occur at any period of gestation, and is the only certain method we know of procuring abortion at our own time,) thereby causing the blood which in a natural state circulated through the Placenta, to act now on the Uterus, becoming a stimulus exciting it to greater action. Or how do we account for the excessive Hæmorrhage from a few vessels, when partial separation takes place in labour pains, compared with what it is before they came on and after they cease—in cases of flooding also, when the membranes are ruptured, the flooding almost invariably ceases. But this may be alleged as one reason why the blood is not the stimulus, but from the action of the Uterus, when it can compress the contents of the part and cause the cavity to be smaller, the vessels on the internal parts of the Uterus become pressed, and the presenting part forming a plug in the Os Uteri, coagula are formed at the mouths of the vessels, which, together with the pressure, prevent the Hæmorrhage; but if the pains be slight, and the blood passing without any great specific power of the Uterus, the Hæmorrhage will continue in all its frightfulness until the Uterus by its common muscular power contracts on the placenta after the membranes are ruptured, and prevents its large circulation, then the stimulus is applied to the Uterus and excites it to action. If the membranes be not ruptured the pains often never come on, and the blood passing off by the open mouths of the Uterine arte-

ries, the necessary stimulus to delivery, namely, the extra quantity of blood, is altogether lost, and unless relief be afforded by turning, the patient's life would be in the greatest danger. By the timely aid of turning, though delivery does not follow directly, all Hæmorrhage is immediately stopped, although a larger portion of the Placenta may have been removed from its adhesion to the Uterus. Lastly, I would observe, that in cases of Hæmorrhage the delivery often never takes place, although the struggles have been very great, this evidently happens for want of the stimulus of the blood to cause delivery. To augment this stimulus, then, I consider to be the peculiar virtue of the Ergot of Rye. Its power is seen in the deadness of the extremities, caused by the contraction of the circulation, and by some particular quality inherent in the Ergot, the blood withdrawn by it from the extremities is determined to the Uterus, and excites it to a more powerful action; that the blood imbibes from it any poisonous and injurious property destructive to the infant's life, I consider mere nonsense, which can only have originated from want of experience of its real effects. I have been somewhat particular in the explanation of what I consider to be the exciting cause of delivery, as on a clear apprehension of the natural cause, the right understanding of the assistance rendered to nature by the Ergot of Rye will greatly depend. I am at a loss to conjecture how a work so ably edited as the Medical Repository is could

have sanctioned so absurd a notion, as that Ergot acting as a poison, causes the expulsion of the Fœtus by reducing the patient to the last extremity in the same manner as the Fœces, Urine, &c. are expelled in the agonies of death. It is said also to put both mother and fœtus in jeopardy, whereas in my confined practice I consider it to have saved the lives of many children, and were it introduced into general practice, the death of a woman in child-bed would be rarely or never heard of. Flooding is also said to cause death when Ergot is administered ; from my experience, I should say, death from flooding, when Ergot has been given, can never occur, it is, on the contrary, of the greatest advantage in cases of flooding, and were it only for its virtues in Hæmorrhage, it would be a most invaluable medicine. But, notwithstanding these mistaken notions of the effects and qualities of the Horned Rye, I am glad the Repository has given us this paper on the subject, as it must lead to a discussion of its real merits, and that will induce practitioners to put its virtues to the test of experience, which will inevitably lead to its universal adoption as an article of acknowledged and established reputation.

In the foregoing pages I have endeavoured to give a brief sketch of the several expedients and assistances to which the medical practitioner has been in the habit of having recourse in difficult cases of parturition. I have explained the nature and effects of the Ergot of Rye, and have attempted to meet

some of the objections which have been urged against its exhibition in such cases. I shall proceed now to give my reader a practical view of the Medical Properties of the Ergot by an ample selection of cases in which I have administered it with complete success, and of *all* those in which I considered it to have failed. From an attentive perusal of the following statement of facts I think every one will be able to judge for himself of the powers of Ergot without attending to the opinions, arguments, or theoretical deductions of any individual whatever. Practice, and practice only, must eventually decide on all subjects of this nature. And the following list which contains a fair specimen of the result of my practice, will, I think, if properly examined, for ever establish the hitherto disputed virtues of the Ergot of Rye.

Case 1. 1826. Farmer B———'s wife, Cardynham, about five miles from home. Called at 2 A.M. She had quick and grinding pains. At first when I arrived I found her nearly easy—a slight discharge of mucus—the Os Uteri about the size of a shilling. Waited until 10 A.M. and then sent for Ergot of Rye, infused ʒss in four ounces of boiling water, it was taken at ten minutes after noon, in fourteen minutes the patient complained of slight pain in her back, in another minute a pain, with an exclamation to hold the back firm with the hand, in eighteen minutes from the time it was first given, she exclaimed, “clap a hand, or the child will fall

to the ground." In this part of England (Cornwall) I should remark, that since the chairs were banished it is the custom for women to be delivered either standing or on their knees. In most instances, it is out of the power of the medical man to persuade them to go to bed, and, in my own opinion, it is the most natural as well as the easiest and quickest method. In consequence of the exclamation I have mentioned, I examined and found the head on the perinæum and without any relaxation of the pain the child was born, not to my astonishment, as I had before often witnessed the most marked effects from the administration of this remedy. The woman declared that I ought never to be without it as she had never been delivered so easily. This I consider a very marked case. It was her twelfth delivery. I had before attended her on four, two of which were over before I could arrive, and on the other two she had only four expulsive pains on one and five on the other, having a capacious pelvis. The after birth had been detained in every case nearly twenty minutes, in this it followed before I had divided the Umbilical Cord, she had always been troubled with after pains so as to have recourse to opium, in this case she did not require it. The child was living and well. I heard nothing more from her until about a month afterwards when I was desired to divide the Frænum Linguae which incommoded the child's sucking. When the Cord was divided the blood which followed was almost black with scarcely any apparent cir-

culation; the blood which followed the separation of the Placenta was in the same state.

Case 2. P—— L——'s wife, Bodmin Parish, 1826. I was called in this case at 1 A.M. on her sixth child. The pains had nearly left her, a constant inclination to void urine, the Os Uteri not at all dilated, scarcely any mucous discharge, and to all appearance labour had passed off. But as this woman had had a quick time in her other labours, in all of which, one excepted, I had attended her, I did not like to leave her. I sent therefore for some Ergot of Rye, and administered it at 9 A.M.; in precisely fifteen minutes a pain followed. I was at this time below stairs, in about a minute I heard her moan again, I was requested to go up, I found her with a violent pain exclaiming, "what have you given me? I am dying." The pain was not to appearance strong, but with such expulsive power as to finish the labour in thirty-four minutes after the preparation of Rye was given. In this case it was given in four ounces of water, and the same dose as the last; this proved to be a seven months child or thereabout; it was still-born, but by heat and friction it recovered; when I left, both mother and child were well. The same appearance took place with regard to the blood after the separation of the Placenta as in the last case.

Case 3. I. Austle. 1826. My assistant was called on Friday afternoon, the case continued a lingering one. Having sent for some Ergot I went

myself to see the patient on Saturday at 8 P.M. and gave an infusion he had made by boiling, but it entirely failed, in twenty minutes I gave another 3ss, in fifteen minutes she complained of the pain being very severe. The water had been evacuated for many hours without any dilatation of the Os Uteri. In half an hour she complained most dreadfully of the pains although they did not appear expulsive. On examination I found the Os Uteri dilated about the size of a crown-piece, the pains continuing almost incessant; in another half hour the Os Uteri was dilated larger than a tea-cup, and in two hours after the last administration she was delivered, apparently without an expulsive pain, as she kept her mouth constantly open complaining of every thing forcing away from her. This child was dead born, the cuticle being separated, the parts where the cuticle was separated were discoloured and rather offensive. It may here fairly be asked was the death of this child caused by the Ergot? I should think not, as to all appearance it had been dead for a longer period than two hours, as the meconium was coming away. Twelve hours before the birth of the child this woman did not expect for five weeks; the child did not appear to be fully developed; the patient at the time laboured under scrofulous ulcers, with glandular enlargements, and was altogether a diseased person. I state the case as it occurred, my readers must form their own opinion. The woman recovered very well, ex-

clusively of both breasts passing into suppuration from the milk not being properly drawn off, but in other respects no recovery could be more rapid. The same appearances followed the extraction of the Placenta which was immediately forced into the Vagina before there was time to divide the cord.

Case 4. Feb. 27, 1827. Was called to K——, of Blisland, at 8 P. M. She had sharp pains in the back and bowels; having taken thirty drops of Tinct. Opii, the pains were after a time mitigated; remained with her until seven o'clock the following morning, when I left her. The same night, at eleven, I was called again; the pain had been constant since I had seen her before, but had now returned with greater force. I remained with her, but did nothing until 5 A. M. On examination I found the Os Uteri dilated about the size of a sixpence; soon after I left the patient. The same evening I was called again at nine o'clock, the distance being five miles, I arrived about ten, found her much as before, had been in pain the whole of the day. I was prepared with some Ergot, and made an infusion with fifty small grains, about half a drachm, after standing for half an hour, I poured it off, added a little milk, which gave it the pink hue by which you can judge of its goodness. It was administered at a quarter before eleven, about two minutes before eleven the pains were altered, and at ten minutes after the patient expressed a wish that she had not taken it,

the pains continued to increase. At a quarter past eleven, on examination, I found a vertex presentation, the Os Uteri dilated about the size of a wine glass, with a strong forcing down during the pain, without the appearance of expulsion by the breath, or even the least forcing down, or clenching things with the hands. At half past eleven the stomach ejected every thing, all the sensation she felt was a glow in the stomach. At twelve the pains continued without any cessation, the Os Uteri quite dilated, the head bearing on the perinæum, which was firm and thick, the parts well lubricated since the pains came on so severely. (The water was discharged on Sunday, 27th Feb. at 3 A.M. with a slight pain.) The pain continued without intermission until the child was born, in a few minutes the after-birth was propelled into the vagina, with the same appearance of dark coloured blood. The child was living, and strong. I have not seen the woman since.

Case 5. B,—— of Towrose. I was called at five in the morning; pains very severe, both in the back and abdomen, without the least dilatation of the Os Uteri; they continued during the day, apparently expulsive, as if the child was bearing on the perinæum. Opium was twice given, with no other effect than the cessation for a few minutes, after which they returned stronger than before. The Os Uteri, at twelve o'clock, was scarcely to be felt more dilated than before, being only sufficient to pass the finger,

this continued until 8 P.M. It was the first child. I sent five miles for Ergot, administered it at twelve, as before, in infusion of 3 ss.; in eighteen minutes the pain, to a common observer, appeared not so strong or sharp, but the woman put on the Hippocratic face, exclaiming that her bowels were cutting in twain. I examined at half past twelve, found the Os Uteri dilated about the size of a silver penny; the pains continuing, not to force down the head more by the expulsive efforts of the Abdominal Muscles, but rather less, the Uterus still contracting with great force, the Os Uteri, at one o'clock, was dilated to the size of a wine-glass, the parts well lubricated, which before the administration of the Rye were quite void of Mucus. The pains at half past one were strong, accompanied by action of the Abdominal Muscles, causing the child's head to bear firmly, during the pain, on the perinæum, which was hard and inelastic to all appearance, not giving way in the least to the child's head, but after strong efforts, Uterine, &c. the perinæum was dilated, and the delivery effected in two hours and eighteen minutes after taking the Ergot. The appearances afterwards were the same as in the foregoing cases, no flooding, nor any other disagreeable symptoms, an ounce of brandy was given directly after, which I always do, agreeing with Giffard, that a cordial is frequently necessary to compel the Uterus to contract quickly, and, from the exhausted state of patients of this kind, in general, I cannot see any harm that can

result from it. I left this woman and child quite well thirty minutes after the delivery. I have seen her since in the town, with the child; both had been very well, and the child was entirely free from the least spot or blemish. It may be said, that Delivery would in this case have been effected in the same time without the Ergot. I had, however, formed a very different conclusion, and was afterwards confirmed in the view I had taken of it, by the firmness of the perinæum, and the great difficulty of the delivery, though the pains were six to one after the Ergot had been taken. The pains, or throes, after the Ergot had been administered, being incessant, did not allow the parts to get back to their natural state after the pain had left, but kept up the action and preserved the parts in a constant state of dilatation, part of the pain was now not lost in overcoming the rigidity, as the head never retired, from the elasticity of the perinæum, but kept the situation it was forced into without at all retrograding.

Case 6. T—— Herlawn. I was called on the 10th March, 1827. I examined at half 4 P.M. and found the Os Uteri not at all dilated, soft and yielding, without the least bearing down, waters discharged many hours, vertex presentation, sutures collapsed, pains which commenced at 3 A.M. slight.—Should now have left her, if I had not the spurred Rye with me, as I considered it a case which would not terminate for thirty-six hours. As I had no weights, I gave thirty grains of all sizes, I should suppose about

5 ss. The Urine evacuated at four, the Infusion was given at five, at this time the pains were very trifling. At one minute after half-past four there was a pain, in three minutes and a half another pain, in four minutes a third pain, and in three minutes and a quarter another, this continued much the same until fourteen minutes after five, (five being the time the Ergot was given); a smart pain then came on, and was succeeded by others without intermission, until twenty minutes past five, when it ceased for about a minute on her taking the recumbent posture, but which she was not able to keep, although she could not attain the upright position, but continued half pronate, and complained of great lassitude, the pains not expulsive, but very grinding. An intermission of half a minute at half-past five, felt an inclination to void urine, at forty minutes past five the pains were incessant, extremities cold, pulse sixty, no heart-burn, a slight nausea once, pain in the bowels and back, very lancinating, not expulsive, upon examination the Os Uteri dilated about the size of a shilling, with the scalp insinuating itself into the Os Uteri, which now appeared more firm, not so yielding or soft, waters constantly running off, though not so much as some time previously, parts well lubricated, no head-ache, thirst, or perspiration. At six o'clock nausea, succeeded by vomiting, pain as continued as possible, very severe, both in the back and bowels, slightly expulsive. At half-past six an intermission from pain for about a

minute, on examination, the dilatation about the size of half a crown, the scalp pushed through the Os Uteri, still thick and unyielding. An ounce of spirit administered, which was almost immediately rejected, on examination at seven o'clock, the dilatation of the Os Uteri was about the size of a crown piece, with strong pains, about half-past seven it was the size of a tea cup, at eight the pains very expulsive, the whole efforts of nature being exerted to get rid of the child, at this time the head on the perinæum, and the delivery took place at a quarter past eight. Here the labour was not effected in so short a time as in the other cases, but under the circumstances it was concluded more speedily than I expected, as these are the cases which usually detain Medical Men for days. This was an illegitimate birth, the child strong and healthy, the woman I have not seen since, which leads me to conclude that she has recovered well. Here it may be said that the Ergot created nausea, but I would remark, that it did not come on until the dilatation of the Os Uteri took place, and then in almost every case, whether Ergot has been given or not, nausea and vomiting occur. This woman, when I arrived, had one pain only in about three minutes and a half on the average, after the Ergot began to have effect the pains were incessant, and in three minutes and a half she must have had thirty pains, and this caused a saving of at least thirty hours, woman and child both well. Another argument against the Ergot is, that the child is injured

if the delivery does not take place directly. Here is a refutation of this objection, as the child was not born for three hours and a quarter, which of course is long enough if, through delay, it is to have an injurious effect on the child.

Case 7. I was called to P— Clerkenwater, Hel-land parish, 29th July, 1826, found her complaining of pain, examined, and perceiving a face presentation, with a capacious Pelvis, determined, for the sake of experiment, to see the effect of the Ergot, whether it would overcome it, I gave 3 ss. in sixteen minutes it had the usual effect. The urine, when I arrived, had not been evacuated for nine hours, I passed the catheter, abstracted about three ounces previously to the commencement of the pains. After about an hour the pains were excessive and continued, the Os Uteri was fully dilated, but the Uterus was unable to propel its contents. In three hours after the first took effect I gave a second dose ℥ii. this again roused the dormant Uterus, which had not acted for fifteen minutes, and continued for one hour. I did not consider it right to pursue the experiment further, lest it might be serious to the mother, I therefore turned the child, and delivered it in about ten minutes, as is my usual practice in cases of face or ear presentations. This child was born dead. The time from the first administration of the Ergot to the birth of the child, was four hours and forty minutes, before the second dose was given all effect on the Uterus had ceased from the want of

the peculiar stimulus. Here an objection may be taken to turning, after Ergot has been administered, but I found it not at all more difficult than usual. Again, it may be surmised by those who are adverse to the use of Ergot, that this child was killed by the *poisonous effects* of the Ergot, and as the whole case affords the strongest possible refutation of such a supposition, it was fortunate that I was induced to make the experiment which I have just related. On laying my hand on the lower part of the Abdomen, every part of it appeared as full and tense as before the delivery, and on passing up the finger I found on examination another Child in utero. As the pains did not come on, I hesitated whether to have recourse to turning or to give another dose of Ergot, but soon decided in favour of the Spurred Rye, of which I administered ℥ii., in five minutes it had its usual effect, and in nine minutes and a half a fine healthy child was pushed into the world. Now this was five hours and fifty minutes from the first administration of the Ergot, and one hour and forty minutes from the second, and nine minutes and a half from the last dose, in all this Patient took two drachms, wanting one scruple. Now the death of the first child would certainly have been attributed to its being ergotised, and thus poisoned. But I consider it a very fortunate answer to those who suppose still-born children to have been injured by the Ergot. Such a notion has arisen merely from the circumstance that Ergot is seldom given except in cases in which the children

are frequently dead born, either from laborious accouchement, or from the pressure on the child's head. It may be objected, and with great propriety, that I ought not to have given the Rye at all in this case, but I was desirous of observing its effects, if allowed to exhaust itself, and whether any injury would result from it in wrong presentations, and from this case we may observe, that it exhausts itself in about three or four hours. It further proves its usefulness in cases for turning, for it saves the trouble and pain of turning, and the delivery is effected in a very short period when the parts are already dilated. In this case there was great nausea after the dilatation of the Os Uteri, more particularly after both the periods of taking the Ergot. This woman I never heard from after until a few days since, when she applied to me to attend her on another accouchement, one among very many of the instances I have met with, in contradiction of the nonsensical assertion that a woman will not again become pregnant who has once taken the Ergot of Rye.

Case 8. Mrs. ———, St. Mabyn. I was called at 7 A.M. Feb. 12. There was the appearance of grinding pains, not sufficient to examine, remained there all day, and slept there, left in the morning. The pains continued, more or less, in defiance of purgatives, bleeding, and anodynes, until the 7th of March, when I was called again at 8 A.M. I had frequently seen her during the interval. The pains were now

very severe, and from the expulsive appearance of the throes I really thought the child was in perinæo, but on examination, to my surprise, I found the Os Uteri long and soft, and scarcely apparent to the touch, the finger could not be passed through without force, the water had been dribbling away all night. I remained with her all night. The pain continued very severe, not full one minute and a half intermission, until 3 P.M.; examined several times, found the Os Uteri not at all dilated, the neck partly so, still had a difficulty in passing the finger. Opiates had been given several times during the day without any other effect than causing the patient between two or three throes to fall into a gentle slumber—to be roused again in a couple of minutes. Prepared an infusion of Ergot in the usual manner, administered it at half-past three o'clock, at four the pains were very severe and cutting, at this time they were rather less expulsive to appearance than they were before the administration of the Ergot, but they returned in less than a minute. Previous to the taking the Ergot I introduced the catheter as no water had been evacuated since nine o'clock, and then not more than an ounce, the bladder having constantly acted during the night every quarter of an hour so as to throw off every ounce or less of water it contained. This I generally find to be the case when the circulation is first specifically thrown on the parts around, until the Uterus having become acted on, the blood is determined to this part, and the inclination to make

water ceases ; but the blood being carried to the Uterus the natural quantity usually necessary for the secretion and expulsion of urine is lost to these organs, and the bladder in consequence remains empty. This I have constantly observed, and found to be the case in this instance, and I therefore conclude that no urine is secreted until after the labour is concluded. I frequently pass the catheter in deference to the opinions of my teachers, as it was so firmly impressed on my mind that it was necessary to prevent a rupture of the Vesica Urinaria, but have always found that if there are strong labour pains the urine would be all forced away with them. At twenty minutes past five examined, and found the neck wholly obliterated, forming a complete cap to the Vertex of the Head, with the Os Uteri sufficiently opened to admit the finger with ease. I assisted and dilated in a few minutes the Os Uteri to the size of a sixpence, the pains still continuing, the parts got well lubricated with mucus. At five I found the Os Uteri about the size of a crown piece, with the integument over the collapsed bone protruding through it, at half-past five the Os Uteri was the size of a teacup, with a part of the head protruding through it, the perinæum firm, hard, and thick, scarcely admitting two fingers without giving pain. At six the child's head was forced on the perinæum so firmly as to occasion an unpleasant sensation to the finger during the throe, at twenty minutes before seven the perinæum, together with

the labia, &c. were disappearing fast, and at a quarter after seven the patient was delivered after a most exhausting and laborious exertion of a fine dead child, without the least mark or discolouration, or the least appearance of any thing otherwise than in a living child, every thing was tried to produce resuscitation; the lungs were inflated, &c. but all to no purpose; the head was elongated eight inches and a quarter in length, and three inches in circumference. Had not the child died I do not think the delivery would have been effected without the aid of instruments, as the head, had it been living, would not have been moulded into its peculiar shape. This woman was forty-five years of age, had been married twelve years, but never pregnant until this occasion. In this instance the Ergot was given after waiting many hours without the least hope of a conclusion in less than forty-eight hours; the circumstances were certainly very unpromising, for its having a good effect, but here its influence on the Uterus was greater than I expected, the delivery being effected in three hours and three quarters, and without doubt greatly accelerated by the Ergot. The same appearance took place as in other instances in which the Ergot was administered. I saw the patient twice after in the same week; she was so far recovered as to be able to go to another farm a visiting in a fortnight.

Case 9. Tregullion Lauivet; called May 27th, 1826, at 9, A.M. Throes strong and to appearance

expulsive: examined—found the Os Uteri small, scarcely able to admit the fingers; the pains continued until 4 P.M. much in the same way, very distressing, opium was given and a glyster administered without effect. The neck of the Os Uteri was not obliterated, when I gave half a drachm of Ergot in infusion, in thirteen minutes expulsive throes came on, the back became the seat of excruciating pain, the Pubis was particularly complained of, the Catheter was passed without drawing off any water, this continued for twenty minutes, when I found the neck obliterated, and a dilatation had taken place the size of a sixpence, at five o'clock the pains were constant and continued without cessation until half-past five when she was delivered of a fine child. Both continued very well when I last saw them. This case was a young woman of twenty-two years of age and the first child. She was quite satisfied with having taken the Ergot, and declared her determination to have recourse to it again on any future occasion.

Case 10. ———y of the same village sent for me at one o'clock, May 5, 1818; usually had a very good time, but it was now different; the pains smart but an hour or more between; at half-past two I gave 3ss infusion of Ergot, in eight minutes there was a pain, another in twelve, which continued five minutes, when the child was expelled to the astonishment of all present, a fine boy, which, with the mother, were living and well when I saw them last.

This case I marked as particular, as the Os Uteri was dilated only about the size of a shilling when the Ergot was given, and the delivery was effected before any thing could be procured to tie the cord.

Case 11. H——, Penhale, sent for me at half-past five, February 14, 1827. She had no pain, had usually quick accouchements, at six o'clock prepared 3ss of Ergot, and gave it her at half-past six: in fifteen minutes the pain became excessive and constant, in seventeen minutes after seven she was delivered of a fine boy, the same appearance took place as in other cases. The mother did very well. I have noted this as the 107th case in which I have administered the Ergot, and that in all of them it succeeded beyond my expectations. These 107 cases are all the untoward ones I have met with in many years' practice. The numbers I have delivered amount annually to between one and two hundred. I have narrated all the cases of dead born children, and which I consider exceedingly few. The Ergot I am convinced has saved the life of many a child in my practice by hastening its expulsion.

Case 12. F. ——— Lauhydrock, I was called at two o'clock. One child was born before I arrived; it was about a seven months child. I found there was another child, and as there was not the least pain I sent for a drachm of Ergot, with which I made two infusions, one was administered directly, about four o'clock, after waiting about twenty minutes, I repeated the dose, when, to my surprise, it

did not produce any effect whatever. I remained three hours, gave brandy and water, and caused her to walk about the room, used friction and pressure on the abdomen, introduced the finger and pressed on the Os Uteri, punctured the membranes with a knitting kneedle, all to no purpose; and after waiting five hours I passed up my hand, turned the child, and brought it away. Here I have to remark on the appearance of the children. It has been said that the Ergot injures the child, producing pustules, mortification, and death; in this case the first child was dead when I arrived; it was covered all over with small pustules about the size of a silver penny, or rather bladders, as if scalded, with a purple state of all the skin, the legs nearly black; here no Ergot was given; when the second child was born it had the same appearance, but not to so great a degree, it was strong, being delivered without pressure on its surface it did not suffer so much, it lived four days. If the first child had not been born before the administration of the Ergot, it would have been accused of having produced the peculiar appearances and death. I record this case; first to show its failure in some cases like all other medicines, having to contend with such various constitutions, and secondly, to suggest that the appearances attributed to the effect of Ergot on children may not arise from the medicine, but from the untoward circumstances under which it is administered, or from the pressure of the Uterus on the child, or more pro-

bably on the Cord. The woman recovered very quickly until the seventeenth day, having then a return of the discharge of blood, both liquid and in clots. *Saccharum Saturni* was administered in three grain doses every two hours until it ceased; this I suppose had the desired effect as I have not heard from her since.

Case 13. T —, a streamer's wife, called on Saturday, May 28. I was informed that she had had pains for eighteen hours before my arrival, and that they had been more severe, though they were when I came almost incessant. I examined, found the Os Uteri partly dilated, and, after great difficulty, discovered the head presenting as it should do. In endeavouring to pass another finger I could scarcely succeed, owing, in the first place, to the tuberosities of the Ischii approximating so much, that I was obliged to apply the hand flat between them in order to make the examination, and, secondly, the Pelvic inlet was so small as not to admit two fingers without pressure. I found the labour could not be effected by natural pains. I was unwilling to use instruments until compelled. I therefore informed her friends that the labour would be severe, gave her a few drops of Tincture of Opium to allay irritation until the Os Uteri should be fully dilated, and left her, requesting that I might be sent for again when the pains became expulsive. I was required to attend again on Monday the 30th, not because the pains had become expulsive, but because

they had continued much in the same way, and equally quick in succession, during the intermediate time. I arrived at 7 o'clock; on examination found the head jammed into the brim of the Pelvis, the Os Uteri fully dilated, the pains not expulsive. I gave her an infusion of Ergot of Rye $\text{Æii. Aq. } \frac{3}{4}$; in fifteen minutes the pains were almost constant—the legs were completely useless from the 'cramp pains in them. In one hour I repeated the Ergot $\frac{3}{4}$ in infusion, which caused the pains and cramp to be so excruciating, that I almost regretted that I had given the Ergot. At 12 o'clock I tried to apply the forceps, having introduced one blade to the long axis of the Pelvis, I could not turn it to any other position. I tried to introduce the other blade, but it was impossible from the approximation of the Tuberosities of the Ischii. I withdrew the blade, and allowed the case to proceed naturally until two the Tuesday morning, when I found my patient sinking fast, the foetal bones overlapping each other, without having made the least progress since I first saw her, excepting the dilatation of the Os Uteri. I now determined to open the head; this was accomplished after more than half an hour's perseverance, the cranial bones overlapped each other in such a manner, that I was obliged to perforate the bone instead of the Fontanel or Suture;—after this was done, I found it difficult to break down the Cerebrum and Cerebellum so as to diminish its size, on account of the approximation of the Ischii, when this was ef-

fect, the difficulty was by no means overcome, for the head, even when compressed by the violent action of the Uterus, was still twice too large. After I had removed the two parietal bones I again endeavoured to deliver the patient, but was completely foiled. I next divided and took away the Os Occipitis, but could not deliver the head until I had removed a great part of the Os Frontis and part of the Os Temporis, this was however completed after two hours laborious exertion. I now hoped I had removed all the difficulty, but was mistaken, for the shoulders proved as great an impediment as the head, and I believe the child never would have passed had I not taken off one Humerus Scapula and Clavicle, and loosened several of the upper ribs, after which the child was forced into a narrow compass, and expelled after a great exertion. I should not have given this case had not the Ergot been administered as a last resource before the mutilation of the child. It may, therefore, serve to show, that it may be given with safety in any case, as this was hopeless from the beginning. The Ergot had its proper effect, but the mechanical obstruction was too great to be overcome even by its powerful operation.

This woman recovered very well with the exception of the use of the lower extremities, which she did not recover for many months, and then only in a certain degree, by long continued use of stimulating liniments and friction, still complaining of weakness and deadness in these parts.

Case 14. D — an Innkeeper's wife. Was called at half-past 7 A. M., January 23. The water was discharged at two the same morning rather prematurely, without pain, but which came on by degrees. I examined, found a breech presentation, and left her. I saw her again at 4 P. M., the pain had been severe, but had now nearly left; as it was known by the nurses that I could give a preparation to increase parturitive pains, I was called again at eight o'clock with a request that I would administer something to bring on labour. On examination I found the Os Uteri fully dilated, very little pain, and as that part of the day was approaching when medical men dislike to be detained, at her particular request I administered ℥ii of the Ergot of Rye, in eighteen minutes she began to exclaim on its effects; the pains became very expulsive, which continued for thirty-four minutes, when I passed up the blunt hook and drew down the child, which was delivered in two or three minutes. It was a very healthy infant. I mention this case because there were two powerful opponents to the child's being born alive. It was premature, and born footling, but with both these impediments, added to the *poisonous* effects of the Ergot, which I again repeat from constant experience I entirely disbelieve, it came into the world alive and well.

Case 15. Mrs. L — sent for me March 8, at one o'clock. I was not at home. Another medical man attended at four; but all the pains ceased and she became quite well, exclusive of a constant pain in

the back. I arrived, on being again sent for, at half-past nine, when, on examination, I found the Os Uteri *fully dilated*, and, according to her previous accouchements, I expected that if expulsive pains came on, the delivery would be effected in a few minutes. I had only fifteen grains of Ergot about ten grains in weight, these I administered, but it proved to be of no utility, the pains did not come on, and as it was some distance from my residence I did not send, but waited a few hours and the pains came on naturally, and the child was soon born. I mention this case to show the effect of fear in addition to the instance I have already recorded; to assist also in exploding the doctrine of distension being the cause of the action of the Uterus, and to notice that a small dose of Ergot is of no use whatever—sufficient must be given to have a specific effect on the Uterus.

Case 16. S——, Boscarne. Called at 4 A. M. the pains frequent, water had been discharged for several hours, age thirty-six; on examination found an occiput presentation; parts extremely rigid, so that I concluded on a tedious parturition. Waited until 5 P. M., during this interval the pains occurred every three minutes, very grinding, principally in the back and on the Pubis. I made an infusion of Ergot $\frac{3}{4}$ ss in four ounces of water, kept it at near the temperature of boiling water for five minutes, and having allowed it to stand other five minutes, gave it to the patient, at this time the pains were not ex-

pulsive, but almost constant, the Os Uteri soft; inelastic and dry, the parts not at all lubricated, the head not appearing to press at all on the Os Uteri, the finger could be passed between the head and Os Uteri without feeling the head press on it, even when a pain was on the patient. I administered the Ergot at half-past five, in fifteen minutes I fancied the pain appeared expulsive, at twenty minutes I examined and found the child's head pressed more on the Os Uteri. In an hour the Os Uteri was dilated about the size of half-a-crown, and it dilated by degrees for another hour. In the course of three hours the delivery of a fine child was effected. This, in all probability, would have been a most protracted labour without the assistance of the Ergot, which brought on such constant pains, that for more than two hours there was little or no intermission, it was, indeed, so great, as to bring down the strength and exhaust even more than bleeding could have done. This case is another instance in which, though the delivery was not effected for more than three hours after the administration of the Ergot, the child was as well and strong as a child could be. It is also another exception to the absurd theory that Ergot produces barrenness, as this woman has been confined of a second child, and within sixteen months, even without menstruation succeeding the birth of the first.

Case 17. L——, Pengelly, I was called June 26, 1827, on her eleventh labour, at half-past 8;

waited until 10, pain scarcely to be noticed by a bystander, has been much the same since Saturday the twenty-third, has had a similar accouchement on every child, the surgeon has always been with her twelve hours, the water was discharged during this time. I made an infusion of Ergot which I gave her twenty-two minutes past 10. The notion that a little tea could have any effect was ridiculed by this experienced patient, but at forty-four minutes past 10 I was requested to come up, as she had had several severe throes. I was mistaken, she said, in what you gave me, and I think the child will be soon born; at this time the pains were incessant. I examined, found a breech presentation, passed my finger, and in forty-seven minutes after the Ergot had been administered the child was born, free from the effects attributed to the Ergot, as it cried immediately, though it was not so large as the others had been. Had this child been born dead, as is frequently the case in unnatural presentations, the Ergot would have been again condemned. I have given this case, although it contains nothing particular beyond scores I could record, except that it was a breech presentation, and that all her other labours had been lingering. As I had not attended this patient before I was not aware of this circumstance, or I would not have waited two hours. These cases I consider quite sufficient to explain the *modus operandi*, and to establish the utility of Ergot. I will, however, select a few others before I conclude.

Case 18. B——, Trefry. Called 11th of June. Pains very trifling, almost without any appearance of labour, on examination the Os Uteri not at all dilated, vertex presentation, the scalp slightly corrugated, the membrane having been ruptured without any mucous secretion. Had usually quick labours, thirty grains of Ergot at 2 P.M.; the Urine was evacuated about half-past 1. Pains now trifling, in three minutes after, a slight throe, in twelve another, pulse seventy-four, in fifteen minutes a sharper pain, in sixteen minutes and a half complained that the medicine had made her to be much worse, in twenty minutes the pains became constant, every thing was ejected from the stomach, the Os Uteri fully dilated, pulse sixty-seven, a slight cessation of pain for a minute and a half, on taking the recumbent position not expulsive, Sutures collapsed, great lassitude, with an inability to use the erect position, in twenty-five minutes extremities cold, cramp, and almost forced to hold her up by strength, could not keep the recumbent position; during a pain obliged to drop on the knees by the bed-side, which position was continued until the delivery was effected, still ejecting, pains very expulsive, the internal folds of the Vagina, Labia, &c. lost in the general distension, and in thirty minutes she was delivered of a fine girl; the blood discharged was black, as is usual when Ergot is given.

Case 19. L——, Blisland. First child; complained of pain at 1 P.M., July 1st. I saw her at 9 P.M.

complained of pain in the back and the Regio Pubis. I examined; found the Os Uteri not at all dilated, the pains returned in about six or six minutes and a half. I gave her an infusion of \mathfrak{z} 1 of Ergot as it did not appear very good, in fifteen minutes the pains returned every five minutes, and in twenty-two minutes they returned every three minutes, from twenty-five to thirty she had three throes, but none of them expulsive. I then gave \mathfrak{z} iss, which had no better effect. On minutely examining the Ergot, in each grain or particle (which should have been hard and firm as barley, only having a pinkish hue) I discovered a small worm, which of course accounted for its having failed to produce its proper effect. I waited an hour, when the effect nearly ceased, the pain being much the same as before, about one in six or seven minutes, the pains continued much the same, very languid, even to the birth of the child, which took place at twenty-three minutes past eleven on the following day. Had the Ergot been good, I am convinced the labour would have terminated in two hours and a half at the longest. Here we see the reason why Ergot is held in disrepute by some medical men. It is frequently sold in powder, which, I am confident, will become full of worms and spoil in a week, if the greatest care be not taken of it.

Case 20. G——, Laulivery. I was called at 3 A. M., pains commenced at 12 on the preceding day; had been severe. I remained until 9 A. M., the throes still continuing about one in every eight

minutes, in the intervals for the last two hours she had fainted away, a profuse perspiration was thrown out, pulse fifty-eight, breathing loud after the throes had ceased for a minute or two until she entirely lost her senses, she recovered on the recurrence of the pain, which roused her from the faintness; we endeavoured, during the pains, to give her gruel, as I at first thought the faintness arose from debility, but on due consideration this seemed impossible, as she was a strong, healthy woman. The urine was evacuated unconsciously during each pain, exclamations excessive, the Os Uteri dilated about the size of a shilling, the membranes rather protruding and very tense; I ruptured them, a large quantity of water was evacuated, after the second pain the faintness left entirely, the pains less and not so frequent; I made an infusion of Ergot ʒss., boiling water ʒiiii., it was given at 9 o'clock, in eighteen minutes and a half, pains were increased to two in every eight minutes, and continued to come on quicker until they were constant, which they remained for nearly half an hour, until the woman was delivered at a quarter before 11 of her first child; the after-birth was expelled directly after the child, which is living and well, not the least flooding, but the blood was black as usual. I heard no more of the woman until I saw her in the town quite well.

Case 21. —, Fletcher's Bridge, August 5, 1817. I had attended this woman in two labours, with two medical men, on both occasions we were

obliged to open the child's head, the woman short, weak, and delicate, with a very confined Pelvis, but not deformed. Each medical man attempted to introduce the forceps, but found it could not be effected without causing serious injury to the mother. In the first case it was determined to open the head after waiting from the Wednesday until the Saturday. In the second case the long forceps were applied early in the labour, but it was impossible to fasten them, and had it been otherwise I do not think the child could have been taken, as the forceps when shut would not pass easy.

On this the third occasion, I recommended her to take Ergot of Rye which had been given to me with a positive assurance that it would produce premature labour. I gave her one drachm in infusion, and repeated it every four hours, without any other effect than heat in the stomach, with a very slight nausea. I was exceedingly desirous if possible to avoid the severe operation we had been compelled to have recourse to in the two former instances, and therefore requested her to allow me to bring on a premature delivery, to this she was exceedingly averse, she dreaded the suffering, and supposing it would be as great as on the previous labours wished to drive off the evil day as long as possible. After much persuasion she suffered me to puncture the membranes, which I did with a blow-pipe, allowing the water to be discharged through the pipe until the membranes divided around it, in half an hour the water was

nearly all evacuated, at this time she said she was seven months and a fortnight gone with child. I examined, and to my great annoyance, found the shoulder the presenting part. I was obliged to turn and brought the feet to be the presenting part. I was now compelled to leave her for some hours, having first desired them to send to me when any pains came on, these did not occur until twenty-two hours after the child was turned, I was then sent for but the delivery had taken place about an hour before I arrived. The child lived a few hours after. The woman did very well but was so much displeased at the turning of the child, that I could not persuade her to proceed in the same manner on the next occasion. I therefore declined attending, as I could not be permitted to adopt my own plans. Another medical gentleman was retained, which of course I by no means regretted, she went her full time, and the same difficulties presented, two medical gentlemen were called in and after trying the forceps I was sent for. After the head was reduced I was obliged, from the parts being still too large as in the former cases, to take away the parietal and the other bones of the cranium, but the delivery was in a great measure effected when I arrived, the patient was very nearly exhausted, for two days no one could understand what she said from debility and hoarseness, from the exertion of the forcing pains. It was seven weeks before she could sit up, even moving her from the recumbent posture produced syncope of at least

twenty minutes duration for at least eighteen days after, her skin was completely bleached though very little blood was discharged, she was obliged to be fed from a teapot for many days, even turning in the bed producing syncope. I saw her twelve weeks after to relieve her from general anasarca, but more particularly of the legs, which were swollen to an immense size; by the application of bandages, with tonics and diuretics combined internally, she very gradually recovered. In 1824 I was again applied to, to be retained, but as she had not attended, and would not now promise to attend to my advice and directions I refused. Another gentleman was spoken to and attended; she went her full time, the same difficulty again occurred, the head was opened, and she was delivered as before. This case is not published with a view to elucidate any practice with respect to Ergot, but principally to shew that in narrow Pelvis, in cases where the head must be reduced if suffered to go the full time, the most eligible method to pursue is to bring on premature delivery at eight months, when the head may be collapsed to any size and the child be born alive. This case however tends to destroy two theories with regard to the Ergot, first, that it produces barrenness, this woman had several children after taking six drachms of Ergot of Rye, secondly, that it will produce abortion, six drachms had no such effect.

The cases now recorded I think amply sufficient to explain the properties and effects of Ergot, but

though it has little connection with my original intention, which is to explain its efficacy in difficult cases of child-birth, I shall proceed to mention a few cases in which I have given it in disease, and in the early months of pregnancy, with one case where it was administered in convulsions.

Case 22. K——, Trebele was taken in labour of her second child at 12 o'clock at night. I found she had had convulsions for several hours, there were no pains ; they did not appear to be puerperal though she expected to be confined every day, it required two men to hold her to prevent her injuring herself, there was not that sonorous breathing nor fullness about the head which accompany the puerperal convulsions. I gave her large and repeated doses of Opium, which subdued the convulsions for about forty-eight hours, they then returned, and I sent her an infusion of Ergot of Rye, and within the hour went to her myself. I found the child born when I arrived, its birth having been effected in thirty-five minutes after the Ergot was administered.

Case 23. P——, Bodmin. I visited on the 28th of June, she had a suppression of the menses for two months, but now they came away in an immoderate quantity. In similar cases they had intermitted, and then came on the same way, until she was reduced to the lowest ebb of debility, large clots coming away, the menstruation has been irregular for many years. Blue Pill gr. v. Ext. Gent. gr. iii. at bedtime, and a Cathartic the following morning. After

it had operated, Ergot of Rye ʒss boiling water ʒiiii an ounce to be taken twice every day with four grains of Sugar of Lead, which entirely stopped it without the least disagreeable effect. This discharge has generally been attended with a kind of membrane in it, and had it not been for the woman's age, fifty-four, and her general habits, on first looking at the discharge the membranes appeared to be part of those whose use is to contain the foetus, but this was a case of Menorrhagia of the Class 3rd Order 3rd of Macbride, whose classification is most simple. Cullen gives it the first and fourth. It may be said that in this case the Lead had more to do in checking the Menorrhagic discharge than the Ergot. This supposition may be correct, but I have found it usefully combined in Uterine Hæmorrhage.

Case 24. T——, Kingswood. I saw her Feb. 3, with a great discharge of blood, similar to the last, membranes discharged in it; being a young woman, and bearing a child every two years, I first considered it a case of miscarriage, there had been a slight pain in the back before I saw her, she had been confined several days, the face most completely bleached, the head not to be lifted from the pillow without fainting, the discharge still continued, the bed was completely soaked over at least four feet of its surface in length, I applied a sheet dipped in cold water and wrung all over her while in a state of nudity, it checked it for an hour by repeated applications until the patient was as cold as the vital power could endure, as

soon as the application was relinquished the heat of the body became excessive and the hæmorrhage returned as bad as ever. A half pint of infusion of four drachms of Ergot was now made, a fourth part of which was administered every four hours until three parts were taken, when it produced such sickness, that the patient by vomiting brought on the other complaint worse than it ever was. I then gave her an infusion of Columba which soon allayed the vomiting, and in which, after it had been taken twice, I administered my old remedy the acetate of lead, which after sixteen grains had been taken had the desired effect of restraining the hæmorrhage. Had Ergot been given in combination it might have had the credit of the cure. Whether this was a case of Menorrhagia or miscarriage I cannot determine. There was no brownness of the nipple, nor any other symptoms, except the suppression of the menses for four periods to induce the belief of abortion. The woman had not the most distant notion of being with child, although in former instances she knew it almost immediately. I am inclined therefore to consider it a case of Menorrhagia; I examined nearly all the coagulated blood after I saw her, and they had been very particular before I came.

Case 25. N——, Bodmin, has been affected with a disease of the stomach; constant vomiting after taking any thing except ship-biscuit for more than twelve weeks. At different times ejecting blood from the stomach to the amount of two pounds,

swelled legs, urine scanty, restless nights, blanched skin and lips, acute pain in the left Hypochondrium, no menstruation since first attacked, faintness with debility, and a total inability to walk up hill, tongue clean but nearly blanched, thirst great, and the quantity of food taken for more than twelve days has not averaged an ounce of biscuit per day, no soup, pastry, pudding, or any thing in the shape of animal produce. The treatment has been, frequent bleeding, leeches, cupping, purgatives, balsamics (but the greatest relief has been received from emetics) Emenagogues with anodynes at night, diuretics. Calomel has been given to a great extent, even after emetics, without affecting the glands, even Mercurial friction for a long period had no effect. There appeared at first an affection of the liver, the nitro muriatic bath was tried, an injection of Ammon. in order to bring on the menses, the hip bath and all the means we possessed, I then thought of trying the Ergot as an Emenagogue, one scruple was first given in powder three times every day, increasing one scruple every day until *the dose* became one drachm, on which the increase was discontinued for two days, after which it was increased to six drachms per day without producing sickness or any other unpleasant symptoms, she fancied it remained on the stomach better than any other thing she had taken, but it produced no effect on the Chlorotic symptoms, nor was it of the least service in any shape whatever.

Case 26. C——, Cardynham, applied to me for excessive menstruation, or Menorrhagia Rubra of Cullen, age about forty-seven. Menstruation every fortnight, continues from six to eight days, producing great debility, a complete hæmorrhage coming away in large clots, on its decline I gave her Ergot $\mathfrak{z}\text{i}$ to be continued every four hours, but I found that, after six doses, there was no cessation of the hæmorrhage, I therefore employed my old remedy, the Sacch. Saturni, which checked it in five hours.

Case 27. An unmarried lady, about forty-five. The menstruation ceased, which was soon followed by spasms, with a constant pain of the back, which, creeping up the spine, often ended, when more severe than common, in a spasm of the diaphragm. This always gave way to twenty drops of the Liquor Opii Sedativus of Batley, but only for a short time, it frequently returning again in an hour. Bleeding, hip-bath, and other means to produce menstruation and reduce Plethora, were used, but without any effect, except the reduction of the patient's strength. I was persuaded to try the effect of Ergot, which, in doses of a drachm and a half, increased until it came to three drachms, produced not the least benefit. It caused sickness, which I attributed to the bulk, of which the patient sadly complained. This patient is much better, the spasms having yielded to a sparing diet, abstaining from Malt, Spirituous and Vinous Liquors, combined with purging. The menstruation has never returned, and I suppose it never will.

Case 28. Mrs. —, Bodmin, a married woman, having been ill seven months with anomalous complaints, principally lightness of head, shortness of breath, cessation of menstruation, since the birth of the last child. She had not suckled it for the last six months, the child having been weaned on account of her bad state of health, which continued to grow worse, attended with sickness, and vomiting a little mucous every morning. I thought her pregnant, and continued merely to relieve the most urgent symptoms, until the fourth month passed away, when I expected she would have felt the child, but I was mistaken, the fifth month passed, and she still declared she was not pregnant, and, after six months and a fortnight, observing she did not increase in size, and that her muscular strength was evidently failing, attended with a chlorotic countenance, I determined to try Emenagogues. The first I gave was the Ergot of Rye, combined with the hip-bath and Aloetic purgatives, which were continued eleven days, beginning with half a drachm of the Ergot of Rye thrice daily. After she had taken six powders, I increased the dose to ℥ii, for three days; it had no effect, and as the time had arrived that it should have produced benefit, and the patient feeling not the slightest effect from it, I ordered ℥i the next three days to be given in powder, (the first doses having been taken in infusion,) this created nausea. I then gave a drachm and a half for two days in infusion, which only caused a pleasant heating sensation

in the stomach but it produced no benefit whatever. I then gave it up, and tried the Sulphate of Iron with no better success. At this time a very troublesome cough came on, and as the patient was of a Phthisical habit, with a very indistinct murmur in the right superior side of the chest, I began to fear that what we had been treating for Chlorosis was incipient Phthisis; I therefore ordered nauseating doses of the Cuprum Ammoniatum, and advised warm sea air. At this time no menstruation had appeared for twelve months. She now left for the change of air, and returned to Bodmin in six weeks, quite recovered. On the evening of her return she felt a slight pain in the back, which she thought little of, attributing it to the shaking of the carriage, but at twelve o'clock in the night I was called, found great hæmorrhage, with pain in the back and bowels, I was fully convinced there would be a miscarriage, as there were a great many coagula in the bed, I had them removed, and on examination found the ovum whole, on opening it I discovered a child, or foetus, about ten weeks old. This was the seventh birth, five being then alive. I have recorded this case to shew, that a Chlorotic Uterus was impregnated even during the time of the administration of the Ergot of Rye, and the miscarriage could not possibly have any connection with the exhibition of Ergot. The woman has since menstruated as regularly as possible.

Case 29. A young woman applied to me with

every appearance of Chlorosis, and being a respectable girl, it was quite out of the question to put such queries as were necessary, or to examine the breasts. There was paleness of the lips and countenance, difficult respiration on going up hill, with general debility. Not having the least doubt that it was Chlorosis I tried the Ergot in 3i doses in infusion, for four days, twice each day, without in the least affecting her. She gradually grew better, and in about six months I heard she was pregnant, and in seven months after was married, and delivered of a fine boy, without any Ergotised blue spots on it, as some affirm to be produced by the Ergot. I have many cases of this kind, in which it has been given without the least effect during gestation, and without the least injury to the child. As I have before observed, I do not believe, from repeated experience, that it has any effect, unless the Uterus is acting at the time of its administration. In cases of twins, when the Uterus has ceased acting on the birth of the first, I have rarely found the Ergot at all useful. Having detailed these cases of its administration in Menorrhagia and Amenorrhœa, I will conclude with one case in which we may observe its very different effect, in cases of flooding at or near childbirth.

Case 31. —, Luxillion. I was called, in the year 1820, to this patient, for a flooding, in the sixth month of gestation, attended with pain in the back. I gave her my old remedy, Sacch. Saturn. when it

ceased until the eighth month. I was then requested to attend her again with the same symptoms, pain in the back, and Uterine Hæmorrhage, I repeated the Lead, but the pain increased very much, and, on examination, I found the Os Uteri partially dilated, with the membranes protruding, I scratched them with the nail and let off the water, on which the Uterine Hæmorrhage ceased, and delivery was soon effected. In 1827 I was requested to attend the same patient on her accouchement. I was again consulted for a Uterine Hæmorrhage, which had been on her for six weeks, I gave her an Inf. of ziv of Ergot in eight ounces of water, directing her to take two table spoonsfull every four hours, this was on Saturday, the 22d of September. On Monday, the 24th, at 9 o'clock, I was called to attend her, pains at this time very severe, the [hæmorrhage stopped, and had been before she finished taking the Ergot, countenance completely blanched with extreme prostration of strength. I became rather alarmed, as, on former occasions, I had always been obliged to lay cold wetted sheets across the bowels, and give her brandy, in order to restrain the hæmorrhage. She had fainted on several occasions, and continued fainting and recovering for five or six hours. At ten o'clock she was delivered of a fine boy, the faintness never once occurred, the flooding was trifling, and she had never experienced so good a recovery on any child-birth. On the others, the after-pains, when the faintness and hæmorrhage had

ceased, were generally so severe that even opium could procure her no sleep for two nights. In this case, the after-pain was scarcely worth notice. Whether the flooding here ceased as a natural consequence of the pains coming on, is of little importance, provided the Ergot produced the pain, as it appears to me to be incompatible to have sharp pains and flooding existing together. It must be allowed, that pains seldom come on severe when there is a great degree of Uterine Hæmorrhage, for the very stimulus which is to cause the contraction of the Uterus, the superabundant quantity of blood, is taken away in the flooding. In these instances delivery is seldom effected until the last extremity, when the parts begin to relax with their loss, and afford little or no resistance. As nature sinks at the approach of death, every effort is made to resist, and in the last agony all extraneous matter is often excluded, thus, between life and death, the child is sometimes born, and the mother found to be dead. The Ergot was here given twenty-six hours before delivery, without injury, after a flooding of many weeks, and I am firmly persuaded, that had not the Ergot restrained the excessive hæmorrhage to which this patient was subject after delivery, she would not on this occasion have survived two hours.

CONCLUSION.

SUCH are the cases which I have thought fit to submit to the Profession. An abstract even of those I have notes of, would have filled a large volume. On the 2d of October, 1827, I administered it in three different cases, with its usual good success, and I am convinced that, ere long, the Accoucheur will no more think of attending a patient without Ergot in his pocket, than the Surgeon would at present without a lancet. Should any one still be afraid to exhibit it, from its marked and powerful effects on the Uterus, I can assure him I have used it in many hundred cases, and in no case should I be afraid to do so, were I on the spot at the time. The only caution I would give respecting it is, not to send it except in the immediate neighbourhood, as, should it be a wrong presentation, it would occasion unnecessary pain to the patient before the Accoucheur might arrive. On one occasion, when I was unable to attend immediately, I sent an eight ounce bottle of Inf. of Ergot, half to be taken directly, as the pains were described to me as lingering. On two previous occasions I had been detained two days by this patient, presentation and every thing proper, but the pains came on at lengthened intervals, and were very

slight. In this instance when I arrived, in about an hour and forty minutes after the administration of the Ergot, I found a shoulder presentation. I turned immediately, and whether I exerted more force than usual, thinking the power of the Ergot was to be overcome, I certainly never turned more easily or succeeded better. The child and mother both did remarkably well, both the former children died from the lingering nature of their births. From this time I never sent the Ergot to be administered unless I was myself present. But even in these cases, I would observe, it does not operate to the disadvantage of turning.

So much has been said of its injurious effects from continued use, that I determined on making the experiment on myself. With this view I took $\mathfrak{z}i$ in Inf. September 25, 1827, the 26th, 27th, 28th, and 29th. I then increased it to $\mathfrak{z}ss$ the 30th and Oct. 1; the four following days I took $\mathfrak{z}ii$; the 6th, 7th, 8th, 9th, I increased it to $\mathfrak{z}i$ at each dose, which was repeated twice every day, making in all eighteen drachms in fourteen days, so perfectly convinced was I of its innocency. The only effect or sensation I felt from it was this—The first dose I took felt on the stomach much like a glass of old beer, no lightness nor other symptom of any kind, the same sensation occurred until the last three doses, which produced no more effect than if I had drank a cup of tea. I have felt not the least unpleasant consequence since, nor did I from the beginning, although the smallest quan-

tity I took at any one time, except on the first four days, is the dose I am in the common practice of giving.

I consider the Ergot as such an acquisition to my Midwifery practice, that I never go without it. I have never once regretted its use, and I invariably find that women recover much better after it than they had done before. If the woman has been subject to flooding, on former labours, I have given the Ergot with a view to prevent it, with very good success. It also mitigates the severity of the after-pains, so as nearly to subdue them altogether. Its virtues are not confined to the acceleration of the action of the Uterus during labour, it also causes it to contract immediately, and detaches the Placenta from the body of the Uterus, so that you have never to wait five minutes for its separation. I have never known an instance of adhesion when Ergot has been given. I would, however, caution those who are strangers to its properties, to take away the Placenta directly, otherwise they will find the Uterus contracting all around it, and will experience some little trouble in the dilatation of the Os Uteri, I have several times found the Os Uteri contracting so firmly, as to oblige me to introduce the finger through it.

As to the form in which the Ergot should be administered there are various opinions. One recommends the Powder, another the Tincture, and a third prefers the Infusion. Dr. Reece says the saturated Tincture is the best mode of administering it, and

quotes Mr. Haighton as his authority. I tried the saturated Tincture in doses of Ergot \mathfrak{v} ii Spt. Vin. Rect. \mathfrak{z} ss at one dose, it failed in every case, producing very languid throes, indeed I doubted whether they were at all increased by the tincture. I afterwards tried it with proof spirit with no better success, the effect produced by it could scarcely be noticed by the medical attendant. The Spirit, it is said, acts on the nerves, but I fancy spirit lessens nervous excitability, and destroys the effect you are desirous of producing. Whoever gives Decoction and Tincture of Digitalis without noticing the very different effect produced by a decoction just allowed to boil, or from a mere infusion? The same observation applies to the White Poppy Capsule, who ever thought of preferring its Tincture to the Infusion, which is known to produce effects so very different? In fact all vegetable substances, whose virtues reside in an alkali, are much better prepared as an Infusion. Who, for instance, would place Infusion of Peruvian Bark and Tincture in the same rank? Any one who did would soon discover, on experience, the comparative inutility of the Tincture.

I have sometimes used a syrup \mathfrak{z} i of Ergot to \mathfrak{z} 4 of syrup, giving it in half-ounce doses—this produced effects equal in every respect to the Infusion, and is, in my opinion, the only preparation of it at all worth keeping. The Tincture and vinegar possess little of its peculiar virtues, and the powder will nine tenths of it spoil in ten days. The powder is also objection-

able from its producing vertigo and other unpleasant symptoms, and has nothing, I conceive, to recommend it but economy, as half a scruple will produce as powerful effects as half a drachm in Infusion—but economy in medicine should never be attended to. Whenever I have given it in powder it has been for the sake of the experiment, and it is a practice I find no encouragement to resume, as I am convinced there is something more than extractive which produces the symptoms sometimes consequent on the administration of the Powder or Tincture. The Syrup and Infusion are perfectly harmless, not often exciting even nausea when taken in very large doses.

I am, I find, entirely borne out in the opinions I have advanced in this publication by cases published by Mr. Wakley of the patients of Mr. Prowse of Bristol. He has given it in half drachm doses in powder, and has succeeded in much the same manner that I have. The conclusions he has arrived at are the very same, that it increases the contractility of the Uterus, diminishes the rigidity of the Os Uteri, detaches the Placenta directly, suppresses the hæmorrhage so often fatal after delivery, and, if the after birth be attended to immediately after the child is born, prevents hour-glass contraction of the Uterus; the last of its virtues though not the least, which Mr. Prowse has not noticed, is, that it prevents the after-pains from being severe.

By those who consider Ergot as poisonous, it is classed among the acrid poisons along side the Ra-

phanus Raphanistrum. Milk is said to be its antidote. I merely mention this as it may suggest a reason why the Ergot has been so mild in my practice, as I always add one third milk to the Infusion. I adopted this custom because I have found milk to allay the heart-burn, and I therefore concluded that it would prevent the heating sensation in the stomach. But when it is added that the most approved remedy for an over dose is vomiting and purging, I confess the cure appears to me far worse than the *poison*. I once saw an ounce given in a half-pint infusion by mistake, I was somewhat alarmed, and immediately sent for an emetic, which I gave an hour and forty minutes after the Ergot had been taken, a slight nausea came on, and part of it was ejected in an hour after, the remaining part was thrown up by the emetic. At this time from my more familiar acquaintance with the Ergot, I should not trouble myself should the same thing occur, as the emetic was by far the more distressing part to the patient. As I have before observed, I am at a loss to imagine why it should be ranked among the poisons. It is said to be a slow poison, producing gangrene by its continued use. But is not this the case with all vegetated grain? By keeping up a constant action of the bowels, would not malt and its produce wort and yeast produce the same disease? It is well known that yeast, &c. if given in the early stages of Typhus will produce a good effect by the excitement of the intestinal canal, but if continued, the very same ex-

citement will cause Typhus to run the sooner into gangrene, which it is always so prone to. Until, then, wort, malt, or yeast, be placed among the poisons, I see no reason why Ergot should be so ranked.

The more I see of Ergot in my practice, the more frequently I am induced to have recourse to it. If I arrive now and find the labour likely to be concluded in half an hour, yet if from previous acquaintance with my patient I know there is a probability of flooding after, I give Ergot to prevent this dangerous consequence, for, if delayed until after the birth it will have no effect on the hæmorrhage.

In conclusion I have merely to observe that my only motive for undertaking the trouble of this publication is a firm conviction of its utility. It appears to me that the Ergot is creeping gradually into practice, with no sufficient guide to direct the accoucheur in its administration. All the information as yet published on the subject is contained in various periodicals, scattered over so many different numbers, and giving such opposite opinions of its effects as to afford little or no satisfaction to any one disposed to try its properties. The treatises sent forth to the world in opposition to its introduction as a useful medicine have of course been a further inducement to me to give my experience of this article to the profession. Lastly, from the great assistance I have derived from it, I am desirous that my medical brethren should also become acquainted with it. That it is at present very little known, or at all events not so well

known as it deserves to be, I have great reason to suppose, as only one druggist, I believe, in the county of Cornwall keeps it among his medicines, and that one at first ordered it, and at present keeps it, principally for my use. Having drawn my conclusion from this fact, I may, perhaps, be wrong in my estimate of the acquaintance of the medical world with the virtues of Ergot, they may be better known than I imagine, though they have not yet penetrated into these “uttermost parts of the earth”—“in ultimos orbis Britannos.”—I may therefore have undertaken a very useless work, and many of my brethren could perhaps communicate information on the subject much more valuable than that I have presumed to lay before them; should this be the case, I can only say with the author just quoted—

Vive; vale, si quid novisti rectius istis,
Candidus imperti; si non, his utere mecum.

FINIS.





